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No. 5.

SOME EXPERIENCES IN THE COMMONER TROPICAL DISEASES IN (LATE) GERMAN NEW GUINEA.¹

By Laurence H. Hughes, M.B., Ch.M. (Syd.),
Sydney.

I feel somewhat diffident in bringing this paper before you this evening, but perhaps I might excuse myself on the grounds that, although several papers have been read by members who served in the different fields of war "on the other side," there has been no contribution from those of us whose lot it was to serve in German New Guinea. I could wish that the matter had been placed before you by someone more competent to deal with it in a manner representative of the actual work done by the medical services in these parts, but I trust I will not unduly trespass upon your attention in my endeavour to outline briefly some of my experiences in the north-west Pacific.

I shall deal solely with diseases which, though essentially tropical in nature, are, through war conditions, commonly met with now-a-days in this country.

(1) Malaria.

This disease is one which is full of interest to the physician. I am given to believe that, prior to the occupation by Australian troops and for some months afterwards, Rabaul and Madang, to take two of the main commercial centres of the possessions as an example, were both hotbeds of malaria. The advent of Colonel Strangman as Principal Medical Officer in November, 1914, and his crusade upon the mosquito wrought some marked changes for the better in regard to the prevalence of this disease. An outline of some of the methods adopted will be briefly touched upon later. In regard to the symptoms of the disease, those which occur during a typical attack are well known and need not be reiterated. One is struck, however, with the atypical manner in which the disease may present itself. For this reason every patient who came under observation, even though he complained of some apparently trivial symptom associated with the slightest rise in temperature, was considered to have malaria until the blood examination should prove the absence of this infection. In this way alone could possibly regrettable mistakes be avoided. Blood slides were taken as soon as possible after the patient was first seen. Should these prove negative, subsequent examinations were made during the ensuing 24 hours. Leishman's stain was used as a routine in all cases and gave very satisfactory blood pictures.

Diagnosis.—A word may be said here in regard to the diagnosis of malaria from the microscopical examination of the blood slide. The presence of the parasite in one of its numerous forms is, of course, the main positive evidence. But it is by no means the sole indication. Cases are not infrequently met with, particularly in malignant infections and in those instances in which the patients have dosed themselves

freely with quinine prior to examination, in which repeated examinations fail to show the presence of the parasite. A noticeable increase in the percentage of large mononuclear leucocytes in the film is, I think, of marked diagnostic importance in malarial infections. I made it a practice to carry out, when time permitted, a differential count in all blood smears examined and found this increased percentage to be an almost constant feature in malarial cases. This leucocytic variation is not affected by quinine and, although sometimes found in other diseases, is a valuable indication of recent malaria. The presence of pigment granules in the leucocytes is another sign not infrequently observed in malarial blood. Polychromasia of the red cells is common, but the same condition is, of course, frequently seen in other pathological blood conditions. The tertian and subtertian parasites were those most commonly seen. Personally I saw only one case of quartan infection. Mixed infections commonly occurred. In this connexion it may be observed that as the subtertian or malignant parasite is seen solely in its ring form in the peripheral blood during the early stages of infection, it is helpful from the point of view of subsequent treatment to discriminate between it and the ring form of the tertian or benign parasite. This is not always an easy matter, but I would mention the comparatively larger size and fainter staining properties of the infected red cell in the benign form and especially the frequently found flattening of the chromatin in the subtertian ring as compared with the rounder dot-like form of the chromatin in the benign ring. The presence of the subtertian crescent-form, of course, clinches the diagnosis of malignant infections, but it is rarely detected in the peripheral blood before the seventh day of the attack. Multiple infection of the red cell, *i.e.*, the presence of two or more parasites in the one cell, is perhaps more common in the subtertian type, but is by no means diagnostic as the same condition is frequently found in the benign form.

Treatment.—Treatment must be considered firstly from the point of view of prophylaxis and in this matter much can be done to decrease the incidence of the disease. The main part of prophylaxis consists, of course, in the destruction of the breeding places of the mosquito and of the larval form of the insect. In New Guinea this work was carried out extensively and thoroughly by means of gangs of native work-boys under the supervision of medical orderlies. It consisted largely in the collection and destruction of all open receptacles that might hold fresh water. In a tropical country this is no mean task. In the first place the long Kunai grass, a pest in more ways than one in the possessions, has to be kept constantly cut in order to facilitate the search for empty coconut shells, bom-boms or the boat-shaped, ensheathing leaves of the coconut palm, tins, sea shells, bamboos and other receptacles capable of holding water. In the bungalows sagging water spouts were a constant source of trouble and had to be regularly examined

¹ Read at a Meeting of the New South Wales Branch of the British Medical Association on November 28, 1919.

and rectified. Trees, especially paws-paws, frequently had to be destroyed; in the case of shade trees, with which, of course, a conservative plan was adopted, gutterings in the trunks were made or the hollows in the trunks filled up with cement. Tanks containing drinking water and also collections of water which could not be drained, were treated twice weekly by applying kerosene to the surface of the water. Swamps, when practicable, were drained into the salt water. As regards other means of prophylaxis mention may be made of the building of European dwellings at a safe distance from native villages, the use of mosquito nets and the prophylactic use of quinine. Quinine parades were held daily and 0.3 to 0.6 gramme doses, according to the prevalence of infection, issued to each man. Much has been written for and against the prophylactic use of quinine; personally I am strongly in favour of it. The treatment of an attack of malaria once it is established consists mainly in the exhibition of quinine. In regard to this matter it must be remembered that we aim at destroying the parasite in the blood; consequently a certain concentration is essential. Furthermore, when quinine is administered by the mouth, its absorption into the system takes some time and, almost simultaneously with absorption, excretion of the drug begins. On these grounds the administration of large doses at frequent intervals seems to be theoretically advisable. From a practical point of view it certainly proved the most satisfactory method in New Guinea and was adopted as a routine procedure. A solution of 0.6 gm. of sulphate of quinine was given every four hours for a period of 10 days, then twice daily for six weeks and subsequently the daily dose at quinine parades. The solution is the surest form in which to administer quinine by the mouth. Tabloid and pill preparations are not to be relied upon and capsules or cachets are unsatisfactory. Intramuscular injections were also made use of in cases when quinine for some reason could not be given by the mouth and as an adjunct to oral administration in malignant cases. In addition to quinine treatment a course of soamin injections, 0.18 gm. every second day for 10 doses, was given after the second week. This treatment, however, was abandoned during the early part of last year and intravenous injections of arseno-benzol were given with more satisfactory results. Two injections were given, one 0.4 to 0.6 grms. during the second or third week and the second, 0.6 grms., a week later. It was, of course, impossible to ascertain its effect as to the ultimate destruction of the parasite, owing to the possibility of re-infection, but its general and tonic effects were most marked in many cases. X-ray exposures of the spleen were carried out largely in Rabaul, but I am unable to speak from experience in this matter. Before leaving the subject of malaria, mention should be made of some of the commoner diseases which it not infrequently simulates in its malignant form. Cerebral symptoms, e.g., coma, convulsions or apoplexy, dysenteric symptoms and pneumonic symptoms, occurring in a patient who has been infected with malaria, should be regarded with suspicion and the possibility of the malarial parasite as the causative agent kept in view.

(2) Blackwater Fever.

This disease is closely associated with malaria in some of its manifestations. It does not seem probable, however, that it is caused by infection with the malarial parasite. It is true that in some cases of blackwater we find malarial parasites in the blood. But many other illnesses will provoke an attack of malaria in a person in whom the parasite is latent. Then, again, there are the cases of blackwater fever in which conclusive evidence of malarial infection is wanting. Of ten cases which came directly under my observation, malarial parasites were found in two. Furthermore it must be noted that the presence of hæmoglobinuria, detected by the spectroscopic test, is a cardinal point in the diagnosis of blackwater fever, whereas it is never present in malaria. Another theory that has been advanced is that this disease is caused by quinine. This may be tenable in regard to the provocation of an attack of blackwater by the administration of quinine to a patient in whom the disease is already latent, in which case the connexion between the disease and the quinine is one of coincidence. In regard to this theory mention may be made of the bearing which irregular dosing with quinine possibly has on the incidence of blackwater fever. I saw no cases of the disease amongst the troops in New Guinea; my experience in it was limited to cases amongst the German residents and the Japanese, Malay and native races. As has been mentioned previously, the troops were supplied with a daily ration of quinine, whereas in the case of the other people alluded to, quinine was, as a rule, taken more or less irregularly, until an attack of malaria was responded to by large doses of quinine and followed not infrequently by the manifestations of blackwater fever.

Treatment.—Treatment is mainly symptomatic, accompanied by the frequent administration of large amounts of fluid by the mouth or *per rectum*. In the latter instance 250 to 500 c.cm. of saline solution should be administered as an enema every hour. If these are not retained, subcutaneous injections of saline solution should be resorted to. The *desideratum* is to keep the renal tubules well flushed. The administration of quinine to these patients needs careful handling and caution must be exercised. If the blood examination be negative for malarial parasites, it should be withheld. If parasites be present it should be administered in tentative doses, due attention being paid to the extent of the hæmoglobinuria present and to the intervals at which it recurs. In this respect it may be suggested that when the hæmoglobinuria is pronounced, it is reasonable to suppose that the hæmolysis is carrying on the work of quinine in regard to the destruction of the parasite and the exhibition of the drug is not indicated.

(3) Dysentery.

The two main types of this disease that were met with were the amœbic and bacillary forms, though occasionally cases that were apparently purely malarial in origin were seen. I saw no cases of a bacillary infection alone amongst the white population, whereas this type predominated amongst the coloured races. Occasionally mixed infections occurred amongst the troops; but in my experience the amœbic

type was much more common. The diagnosis of the latter, apart from the difference in the nature of onset and general symptoms, is, of course, confirmed by the finding of the *Amœba histolytica* in the infected stool. It is to be distinguished from the non-pathogenic *Amœba coli*. The main points of difference are the smaller size of the histolytica, the clearer differentiation between its ectoplasm and endoplasm and its eccentric, indistinct nucleus as compared with the central, clearly-defined nucleus of the non-pathogenic form. Finally the cystic form of *A. coli* contains eight amebule, whereas the cyst of the *A. histolytica* contains but four and the refractive chromidial bodies as well. Prophylactic measures were, of course, adopted in regard to drinking water, the eating of uncooked fruit and vegetables and the immediate disinfection and disposal of excreta. A condenser was installed in Rabaul and from this the troops were supplied with drinking water. On the out-stations the boiling and filtering of the water were substituted. As regards treatment I made it a practice in all cases to begin with an initial dose of 15 to 30 c.cm. of castor oil, with 0.6 mils. of tincture of opium; during the attack the bowels were regulated by means of castor oil and salines. In bacillary cases the sulphate treatment was adopted from the outset. In amœbic infections a course of emetine injections, 0.02 grm. hypodermically three times a day for 10 days, was given. Owing to the scarcity of supplies of emetine bismuth iodide I only had the opportunity of using it in three cases and can consequently not speak from experience in regard to it; but recent observations, e.g., those of Dobell recorded in the *British Medical Journal* of November 4, 1916, give apparently conclusive evidence as to its superiority in these cases. I saw but one case of hepatic abscess complicating amœbic dysentery. I may mention that cases were occasionally seen which presented symptoms of severe diarrhoea somewhat simulating dysentery, but without the presence of marked tenesmus or of blood in the stools. The latter contained numerous yeast cells and tyrosin crystals; the condition improved under the administration of chrome santolin in 0.06 grm. doses three times a day for 3 or 4 days. The condition is probably a mild type of sprue, though no other symptoms of typical sprue were manifest.

(4) Anchylostomiasis or Hookworm Disease.

Although this disease does infect Europeans, I did not meet with any cases apart from the natives. However, as a good deal of interest is being aroused in regard to it in Northern Queensland at the present time, some observations concerning it may not be out of place in this paper.

The disease is prevalent in certain parts of these possessions and it is very probable that if a thorough investigation were carried out, such as was done in Papua, a large percentage of the native population would be found to be infected. Numerous natives from plantations in the vicinity of Rabaul were examined and the ova of *Anchylostomum* found in the stools in a large percentage of them. In regard to symptoms, the combination of epigastric pain and symptoms indicative of derangement of the digestive organs, together with a well-marked anæmia, is always

strongly suggestive of the disease. Two signs which were commonly noted in the natives were a peculiar dry lustreless, exfoliating condition of the skin and a prominent abdomen, the latter being due to ascites. The outstanding feature of the blood examination is the anæmia, accompanied by a well-marked eosinophilia, though the latter is sometimes not present. Neither anisocytosis nor poikilocytosis was observed. The diagnosis is confirmed by the microscopical demonstration of the ova of *Anchylostomum* in the infected stool. These are oval and thin-shelled and show a wide, clear zone separating the shell from the central granular portion, which is characteristically divided into four segments. The ovum of the *Strongylus* closely resembles it, but it is far less common and the enclosed embryo is in a much more advanced state of development. The ova of *Anchylostomum* may be confused with those of *Oxyuris vermicularis* or common thread worm, but it is to be noted that the latter are smaller and asymmetrical, one side being more curved than the other, that they have a doubly-outlined shell and that they contain an embryo which is almost or already completely developed. Treatment was carried out by the administration of calomel and salines, followed on the ensuing day by one gramme of thymol and another gramme half an hour later. A purgative was again administered 5 or 6 hours afterwards and the stools examined for the mature worm. Oil is a solvent of thymol and should not be given during the course of the treatment which is carried out at weekly intervals until a negative result is obtained.

THE RESECTION OF IMPASSABLE STRICTURES OF THE URETHRA.¹

WITH A REPORT OF THREE CASES.

By S. Harry Harris, M.D., Ch.M.,

Honorary Urologist to the Lewisham Hospital; Honorary Urologist to the South Sydney Women's Hospital.

The method of treatment herein described is founded on the following basic principles, viz.: (i.) that the perineal portion of the male urethra may be slit up on its floor to any desired extent and thus converted into a "ribbon"; (ii.) that any damaged portion may then be resected and the ends of the "ribbon" sewn together; (iii.) that, finally, provided no urinary contamination of the wound be permitted, the urethra will resume its tubular form naturally and in due course.

These principles have already more than five years ago been most ably brought before the profession by Dr. Hamilton Russell, of Melbourne, but have not received due recognition. Their application renders possible a great advance in the treatment of these most difficult cases. So much so that the necessity for the repeated and long-continued passage of sounds, the so irksome and necessary corollary to the usual methods of operation, almost entirely disappears.

This paper is devoted solely to the consideration of impassable strictures, which are almost invariably

¹ Read at a Meeting of the New South Wales Branch of the British Medical Association on November 28, 1919.

situated in the region of the bulb. In such cases one generally has to deal with a badly infected bladder and a greater or less degree of impairment of renal function, due to the back pressure. In reconstructive operations in this region, as in all other plastic work, in order to obtain the best results it is important to have as clean an operating field as possible. With this object in view and in order to improve the general condition of the patient, it is probably wise in all such cases to side-track the urine by a suprapubic cystotomy as a preliminary operation. Frequent or, if necessary, constant irrigation through the drainage tube may be adopted after the first 48 hours. The same renal decompression stage is passed through in this condition, as in the two-stage operation on prostatics, though generally to a much lesser degree. An interval of at least seven days should elapse between the two operations.

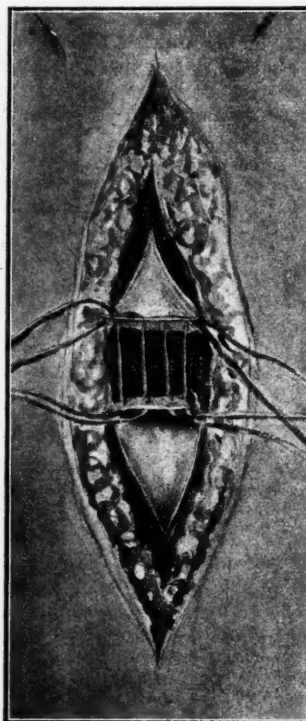
The details of the operation on the perineal urethra are, briefly, as follows, presupposing a normal condition of the anterior urethra. If strictures are present here, they will, of course, require appropriate treatment.

With the patient in the exaggerated lithotomy position, a sound is passed through the meatus to the face of the stricture and the perineal tissues and urethra incised longitudinally for about 4 cm. in front of the stricture. The sides of the urethral incision are then picked up and retracted and search is made for the urethral lumen in the stricture. Should any difficulty be experienced in finding the way through, it is a comparatively simple matter to pass a sound through the cystotomy opening down to the posterior face of the stricture. This is cut down upon and the part of the urethra posterior to the stricture and the stricture itself are laid widely open. If a probe has been passed through the stricture from the front, the reverse order is followed. The perineal portion of the urethra is then converted into a "ribbon," with the strictured area roughly in the centre of the field. The damaged urethral wall is excised and all surrounding scar tissue carefully and completely removed. The whole thickness of the bulb may be excised, if necessary, without endangering the blood supply of the distal portion, as the *glans penis* and *corpus spongiosum* are supplied with blood by the dorsal artery of the penis, in addition to the artery of the bulb. As much of the urethral mucosa is preserved as is consistent with complete removal of the damaged tissue. The two ends of the urethral "ribbon" which are left, are then trimmed up and, if necessary, undercut, so that they may be approximated without undue tension. Two centimetres of mucous membrane, or sometimes even more, may thus be excised without any difficulty in subsequent suturing. From three to seven sutures are required, depending on the size of the urethra. These are of No. 2 plain catgut. They are inserted so as to bring the ends of the urethral "ribbon" snugly together. No further sutures are necessary; the sides of the incision fall naturally together, when the thighs are brought into apposition. A pad and bandage are placed over the perineum and the supra-pubic drainage tube readjusted, if it has been disturbed. It should be left in place for a further period of eight or ten days, when

all drainage may be discarded. No instrumentation of the urethra is practised for at least three weeks after the operation, or preferably longer. A large size "Lister" sound should then pass into the bladder without further resistance than possibly a

slight "kick up" as the point of the sound rides over the transverse suture line. If a full-sized sound will not pass at once, it will be an easy matter to dilate the urethra gently to the required extent. It will be wise to test the capacity of the urethra again in six or eight weeks. After this, if all is well, an occasional visit for inspection is all that is usually necessary. The after-treatment differs very materially in this respect from that of either internal or external urethrotomy.

The operation described above is capable of wide extension in the treatment of ob-



stinate strictures of the bulbous portion of the urethra. If applied to strictures through which an instrument can be passed, it is possible in some cases safely to dispense with the preliminary cystotomy. This step, however, lends an element of additional security in septic cases, which should not be lightly discarded. When this is the case, a perineal tube for bladder drainage should be placed directly through the membranous part of the urethra, as suggested by Russell. This part of the urethra is exposed at the apex of the prostate, as in Young's operation of perineal prostatectomy. The urethra is left wide open in front of the drainage tube. The edges of the *levator ani* muscles should be brought together by one or two sutures of catgut behind the tube.

Case Reports.

CASE I.—H.C., *et.* 60 years, a solicitor, came under examination with overflow retention of urine on March 22, 1918. His bladder reached as high as the umbilicus. He gave a history of difficulty of micturition for 24 years. He had had internal urethrotomy performed in London twenty years previously. There was constant dribbling of urine for the past six weeks. His general condition was one of advanced urinary toxæmia.

A filiform stricture was detected just behind the meatus. There was also an impassable stricture in the region of the bulb. Supra-pubic cystotomy was immediately performed. The bladder was nearly 1.2 cm. in thickness and was filled

with creamy, offensive urine. Glass tube drainage was established. A meatotomy was done at the same time.

On April 30, 1918, a resection of the stricture in the region of the bulb was undertaken. A sound was passed from above, on account of difficulty in finding a way through. The operation was carried out as described above. The supra-public drainage was continued for ten days.

On May 30, 1918, sounds 12-15 and 14-17 passed without difficulty.

August 28, 1918: Sound 14-17 passed easily.

On January 16 and June 14, 1919, the same sounds were passed without difficulty.

On October 12, 1919, i.e., 18 months after the operation, he reported that all was well.

CASE II.—N.B., *et.* 48 years, a labourer, was referred to me on February 22, 1919. He had retention of urine with overflow. The urine was constantly dribbling through multiple offensive fistulae in the perineum, scrotum, penis, groins and the lower regions of the abdomen. The bladder was distended to the level of the umbilicus. An impassable stricture of the bulbous portion of the urethra was discovered. It was difficult to elicit the previous history, owing to the patient's mental dulness.

On February 24, 1919, at the Lewisham General Hospital, a supra-public cystotomy was performed.

On April 6, 1919, a resection of the stricture was carried out. All the fistulae were opened up and the supra-public drainage tubes were readjusted.

On May 4, 1919, all the fistulae had healed. Sound 12-15 passed without difficulty.

On August 21, 1919, sound 14-17 passed without difficulty.

On November 12, 1919, i.e., seven months after the operation, sound 14-17 passed without difficulty.

CASE III.—P.J.G., *et.* 11 years, was referred to me on July 11, 1919. The patient had retention of urine with overflow. The bladder was distended as high as the umbilicus. He was wasted and suffered from recurrent rigors and constant dribbling of urine for the past three weeks. There was a history of ruptured urethra twelve months previously, due to the patient falling astride a fence. A perineal operation had been performed at the time.

July 14, 1919, at the Lewisham General Hospital, a filiform catheter was blocked at the level of the bulb. Supra-public cystotomy was performed. The bladder was found to be nearly 1.2 cm. in thickness.

On August 8, 1919, resection of the stricture was performed; the supra-public tube was readjusted.

On August 16, the supra-public tube was removed. On August 24 the patient urinated naturally; there was a slight supra-public leak.

On September 21, 1919, "Lister" sound 6-9 passed easily. The same sound passed without difficulty on November 2, 1919. The patient was at that time quite well.

THE VALUE OF VON PIRQUET'S TEST FOR TUBERCULOSIS IN CHILDREN.¹

By W. F. Litchfield, M.B. (Syd.),

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The English opinion of von Pirquet's test in children is expressed in the following quotation, taken from an article by J. W. Carr, in Garrod, Batten and Thursfield's book on diseases of children: "Up to the age of two years a positive von Pirquet reaction probably indicates active mischief, because quiescent or obsolescent tubercle is rare in infancy, but afterwards arrested or latent disease becomes so common that the test almost ceases to have any clinical value."

This is not our experience in Sydney. At the Medical Congress held in Sydney in 1911 Dr. E. S. Littlejohn recorded the results of an extensive investigation into the subject at the Children's Hospital.

¹ Read at a Meeting of the New South Wales Branch of the British Medical Association on November 28, 1919.

Dealing with 418 consecutive medical cases, he found that only 5.5% of the patients gave positive von Pirquet reactions, and of these the majority had some clinical evidence of tuberculosis. The number of positive reactions in 201 children under three years of age was eight and in 217 above the age of three years fifteen. He tested also 52 children under treatment for surgical conditions. Of these, 23 yielded negative reactions and the subsequent history showed that they were not suffering from tubercular affections. Dr. Littlejohn also found that in cases of acute generalized tuberculosis the reaction did not always occur, for instance, in seven cases of tubercular meningitis the reaction was negative in three. He concluded, with the reservation just mentioned, that the test was a reliable and valuable one in suspected cases of tuberculosis in children. My own experience accords with that view. During the war, however, the tuberculin at our disposal appeared to give discordant results and, with the view of testing Dr. Penfold's tuberculin, recently issued from the Commonwealth Serum Laboratories, I tested a small series of cases at the Royal Alexandra Hospital for Children. Twenty-two patients were being treated in a special ward for tuberculosis, including seventeen for hip disease and five for spinal caries. Of the total number, nineteen gave very definite positive reactions. The remaining three gave completely negative results, even though tested a second time. Of these, two left the hospital shortly afterwards and I can say nothing more about them. The third patient was a boy, aged 13 years; he had a discharging sinus from the right hip joint and a large, swollen right knee joint, the enlargement chiefly affecting the lower end of the femur, and a discharging sinus from a subacute abscess over his clavicle. Another "cold" abscess subsequently developed in the middle third of his left upper arm. The pus from this abscess was examined and found to contain staphylococci, but no tubercle bacilli. Dr. Clubbe, under whose care the child was, always regarded the case as an anomalous one. I am doubtful whether the case is one of tuberculosis. It may be a chronic pyococcal infection. So much for the positive results. About the same time a girl, aged 10 years, was admitted under my care, suffering from an irregular, but persistent, fever and pus and colon bacilli in the urine. There was a family history of tuberculosis. The von Pirquet test gave a negative result and after treatment with 1.2 grm. doses of potassium citrate the fever abated and ultimately the urine became clear. Another case was that of a boy, aged 5 years. He had an angular curve of the spine in the upper lumbar region and walked with a slight forward stoop. Although there was no pain or rigidity, caries of the spine was suspected. The von Pirquet test was negative. An X-ray photograph was taken and this showed distortion of the lumbar vertebrae, which Dr. Herschel Harris declared to be congenital scoliosis. Two cases of delayed resolution in pneumonia and one of bronchiectasis were also tested with negative results.

These few observations have confirmed my belief that the von Pirquet test for tuberculosis in children in this country, when used and interpreted with dis-

cretion, is of considerable clinical value; they also show that Dr. Penfold's tuberculin is a reliable and active preparation.

I am indebted to the surgeons of the hospital for permission to use their cases.

CONDITIONS THAT SIMULATE TUBERCULAR DISEASE OF THE HIP.¹

By R. B. Wade, M.B., Ch.M. (Syd.),

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Any difficulties that arise in the recognition of tubercular disease of the hip will be found in the early stages, for in the later, when definite bone and joint alterations have arisen that can be detected by the X-rays and secondly by the presence of shortening, rigidity and the classical signs attaching to Nelaton's line and Bryant's triangle, difficulty no longer exists, the condition is self-evident and the whole affair is a matter of prognosis rather than diagnosis.

It always seems to me that the text-book descriptions of many diseases err in giving the late signs of the disease as diagnostic points instead of indicating them as signs of the prognosis; thus the appearance of an intussusception in the rectum should be considered not so much a sign of value in determining the diagnosis of intussusception as rather one of approaching dissolution; so, too, in tubercular hip by the time the classical signs are all present, all hope of procuring a movable joint is gone and the result is inevitable of shortening and possible deformity.

The conditions simulating a tubercular hip may be due to processes causing changes either in the peri-articular tissues or in the joint itself. Instances of the former are changes in the psoas sheath, which, by reason of its passage over the joint, will cause alterations in the function of the joint. Again, infantile paralysis may cause confusion by reason of tenderness in the affected muscles when moved in the acute stage. Any lesions of bones to which are attached muscles that control the movement of the hip joint, will give rise to pain and some limitation of movement of that joint. This may be seen in tubercular lesions of the ischium or great trochanter. Changes within the joint itself that may simulate tubercular disease, are an attenuated sepsis with delayed and modified symptoms, synovial inflammation of rheumatic nature, whether acute or subacute, the sprain fracture of adolescence, traumatic or simple *coxa vara*, the condition known as *osteo-chondritis juvenilis*. Finally there is the mimicry of organic hip joint trouble that occurs in hysterical affections.

What are the outstanding points in tubercular disease of the hip and wherein lie the important differences from these other affections? It is extraordinary how common the history, reliable or otherwise, is of an injury having occurred to the leg six to eight weeks previously. This happens so constantly that, though one is inclined to discount the history of a fall in childhood—they get one more or less daily—

still one is compelled to take this history as of some value. The child walks with a limp and it is for this limp that the medical man is always consulted. This limp is due to the fact that the child walks with his thigh flexed so as to take his weight on to the balls of the toes, and thus to lessen the jar in walking, through the resilient arch of the foot rather than direct through the heel. Night starts are a very uncommon early symptom; pain may be present and is at times referred to the knee, but not so often in my experience as the classical text-book descriptions would lead us to believe.

Examination of the child in the supine position will always lead to the detection of a certain amount of flexion, distinguishable by the presence of lordosis if the legs are straightened out or when the lumbar curve is flattened out by flexing the sound leg on the abdomen, by the presence of flexion of the leg at the hip joint.

The one sign of intra-articular lesion is the presence of muscular tightness or guard action, limiting the movement of the joint in every direction. This is best elicited by bending the knee and flexing the hip to a right angle when movements in every direction will be found to be circumscribed. This is quickly and easily elicited by a movement of circumduction. Should the movement be free in some directions and limited in others, one may lay it down definitely that it is not a condition of tubercular disease of the hip.

Flexion is an early and constant sign and is soon followed by a deviation to one side or other of the limb. The text-books describe three stages: first of flexion, next flexion and abduction and the third of flexion and adduction. In my experience the second stage with abduction is more frequently absent than present. What is the value in the early stages of outside aids, such as X-rays and the von Pirquet reaction? In the early stages X-rays seldom give any help, the tubercular process being too circumscribed to allow the rays to pick up the details. Patches in the neck of the bone of varying density or a fuzziness of outline of the head will be of positive value, but will denote gross changes, by which time the diagnosis will probably be obvious clinically.

The von Pirquet reaction is of decided value and is a comparatively early sign, though in some cases is delayed for two or three months, but, I think, it invariably shows up sooner or later.

The surgeon will be in doubt most often as to the diagnosis in cases in which a child is brought to him limping only; in these cases the doubt exists as to whether it is due to some slight trauma, to a slight rheumatic condition or to an early tubercular process. If the von Pirquet test is positive in the absence of other gross tubercular lesions, it may be definitely assumed that it is tubercular hip. If pain is elicited and movement in all directions at the hip joint is limited, you may be quite sure of the diagnosis. This latter sign is most valuable. I do not think that among those cases in which there was doubt and the last sign was present, there was one that did not prove to be of tubercular nature.

One of the commonest pitfalls is where the psoas

¹ Read at a Meeting of the New South Wales Branch of the British Medical Association on November 28, 1919.

sheath is the seat of some inflammatory process. This may be seen very rarely in an appendicitis, but I have seen it, commonly in the cases of chronic psoas abscess due to Pott's disease and too commonly in cases of acute septic infection, either of the psoas sheath or of the iliac glands just above Poupart's ligament, both of which are frequently accompanied by flexion of the thigh, but no limitation of movement in all directions. The chief limitation of movement is that of extension.

Tubercular affections of the ischium or great trochanter will cause limitation of rotation and flexion respectively, but they are both exceedingly rare. I think I have only seen one of each.

Of the intra-articular conditions an acute rheumatic affection is likely to cause difficulty, but in it there is usually a high temperature as contrasted with the tubercular condition and the symptoms quieten down in a few days with rest and salicylates.

Osteo-chondritis juvenilis, or Perthe's disease, calls for some mention, as it is impossible in the early stages to distinguish it from hip disease, so much so that it is considered by some to be merely a low grade virulence of the affection.

It is a chronic inflammation of the cartilage of the upper epiphysis of the neck of the femur that goes on to the formation of a *coxa vara*. I have seen two cases of this condition. It was indistinguishable at first from tubercular disease, but as it progressed a *coxa vara* without destruction of the head or cartilage developed and the head flattened out in mushroom shape. The condition did not progress after a few months of rest, good movement being secured. Neither of the patients at any time gave a von Pirquet reaction. On this account I believe it to be an entity distinct from tubercular disease. In the early days it is not to be distinguished from the tubercular affection, but as the treatment adopted is the same in both, it is after all only a matter of academic interest to differentiate them.

Coxa vara of rachitic origin may give rise to confusion, but movement is not limited in all directions, being chiefly affected in abduction. An X-ray examination will clinch the diagnosis.

Traumatic *coxa vara* in its initial stages may well lead to error. In this condition there is, as a result of a strain or twist, missing a kick at a football or some similar injury, a crack or green stick fracture of the neck of the femur. If this be untreated and weight-bearing be allowed, the condition goes on to the appearance of *coxa vara*. As a rule it shows symptoms immediately after the injury and is an affection of early adolescence rather than childhood as is tubercular hip.

A very puzzling condition is that of an infection of a joint of a septic type of low grade virulence. This may simulate exactly tubercular disease and can only be distinguished by the early abscess formation and the presence of pyogenic organisms in the pus, with not infrequently the presence of a definite bony sequestrum forming early.

An hysterical hip of the spasmodic type will, too, simulate a tubercular hip very closely, but will usually show signs of more advanced joint trouble. It is associated with excessive rigidity and flexion

without any corresponding changes detectable by X-rays and the von Pirquet test will be negative.

Reports of Cases.

VOLVULUS OF THE COLON, WITH INTERNAL HERNIA OF THE CAECUM.

By Leonard L. Snow, M.B., Ch.M. (Syd.),
Emmaville, New South Wales.

On November 4, 1919, at 11 a.m., I visited a patient, a married woman, aged 21 years, with one child. On the previous evening she had gone to bed feeling quite well. She was restless during the night and did not sleep soundly. At 2.30 a.m. she was attacked with severe pain in the lower part of the abdomen. She said that the pain felt "like wind." It made her writhe. She vomited twice and was somewhat relieved afterwards. The vomitus consisted in the partly digested food she had taken. The pain continued until about 8.30 a.m., when it ceased suddenly. The bowels moved at about 6 a.m.. There was neither blood nor slime in the motion.

At the time of the examination she stated that she felt no pain and was angry that I had been summoned. The temperature was 37.8° C., the pulse rate 110 and the respirations 26.

There was slight tenderness in both left and right hypogastric regions and marked tenderness in the right iliac region. The site of maximum tenderness was at McBurney's point. There was some rigidity limited to this situation. No tenderness could be discovered by vaginal examination in either fornix.

She had had several attacks during the previous 18 months and had ascribed them to "wind." At first there were intervals of three weeks, but later the attacks occurred twice a week and lasted for from four to six hours.

The diagnosis of an acute appendicitis was made and early operation advised. Dr. A. Mackenzie arrived from Glen Innes at 4 p.m. and administered the anæsthetic.

The usual 6.5 cm. gridiron incision for appendicitis was made. A small amount of clear, thin fluid was found in the peritoneal cavity. Neither the caecum nor the colon was found in the right iliac region. In this situation there was only small bowel, slightly distended and of a dark red colour. The transverse colon and omentum were found nearer the mid-line. The colon was contracted, very pale and apparently in a state of volvulus. After some difficulty in following down the ascending colon, I encountered a mass of adhesions in which the caecum and appendix were buried. The inferior mesenteric artery was seen pulsating in this situation. The artery arched over the ileum, caecum and appendix. These structures lay caught up in the loop of the artery to the left side. As the mass of adhesions was placed almost in the middle line, another vertical incision extending for nearly 8 cm. was made through the lower right *linea semilunaris* and the rectus sheath was retracted inwards. The transverse, descending and pelvic colons were involved in one large volvulus with two complete revolutions. This was undone. The whole of the colon and caecum had a mesentery longer than that of the small intestine. The mesentery was attached to the third and fourth lumbar vertebrae and was funnel-shaped like an exaggerated sigmoid mesentery. Its right edge lay in the mid-line and formed a free arch over the terminal part of the ileum. The pulsating inferior mesenteric artery was placed in this arch. The caecum and appendix had become herniated under this arch and lay in the left iliac fossa. There was thus a volvulus of the colon and an internal hernia of the caecum and appendix.

The volvulus had been undone and then the appendix was removed. The parts were then restored to their original positions. I would have resected the long caecal mesentery had the patient's condition admitted a prolongation of the operation. The incisions were closed with reinforced silk-worm gut in the usual layers.

Recovery was uneventful. The bowels were moved on the day following the operation. The patient is now in good condition.

RECOVERY IN A CASE OF INFLUENZAL MENINGITIS.¹

By W. F. Litchfield, M.B. (Syd.),
Honorary Physician, Royal Alexandra Hospital for Children,
Camperdown.

D.S., a girl, aged 1¹¹/₁₂ years, was admitted to the Royal Alexandra Hospital for Children on August 22, 1919. She had been ill seven days suffering from fever, vomiting, malaise and fretfulness. On examination the child was seen to be very irritable; the temperature was 38.8° C. There was a decided *tâche cérébrale*, a tympanic note on percussing the skull and slight rigidity of the neck. The organs otherwise were healthy. On August 25 lumbar puncture was performed and about 60 c.cm. of turbid fluid withdrawn. Dr. Sinclair, the Resident Pathologist, reported the presence of pus and Gram-negative hemophilic organisms having the appearance and giving the cultural characteristics of the influenza bacillus. The fever and irritability continued and lumbar puncture was again performed on August 28, when 50 c.cm. of fluid was withdrawn. On the first of September a third lumbar puncture was done, when 15 c.cm. of fluid was obtained. Dr. Sinclair reported that the fluid contained less pus and fewer organisms. The child improved, but the fever, which was irregular and hectic in type, continued. On August 29 a course of autogenous vaccine was begun and continued for three weeks; a daily inunction of mercury to the back of the neck was also tried for one week. Neither of the procedures succeeding in ending the fever, but the general condition of the child remained satisfactory. The temperature finally remained normal after October 20, namely, in ten weeks from the onset. The patient was discharged on October 26 and has remained well since.

I have seen at different times several cases of influenzal meningitis, but this is the first one in which recovery has occurred. What the relation of influenzal meningitis is to the true epidemic influenza is not easy to state. Following on the recent waves of influenza in Sydney, several cases of influenzal meningitis were admitted to the Children's Hospital. But sporadic cases of influenzal meningitis have come under our notice at the hospital for several years past, during which time, as far as I know, there have been no cases of epidemic influenza. Hence these cases throw no light on the question whether Pfeiffer's bacillus is the cause of epidemic influenza.

Reviews.

PSYCHIATRY.

In the third edition of Dr. Stoddart's "Mind and Its Disorders" the author has fundamentally changed his attitude towards mental disease; he has adopted Freud's doctrines almost *in toto* and relegated the consideration of the physical manifestations of functional nervous disorders to a secondary place. For example, he states that psycho-analysis reveals that neurasthenia is always due to partially or completely repressed auto-eroticism and that psycho-analysis is the only one certain cure for it. The anxiety neurosis and exophthalmic goitre he considers as pure neuroses curable by psycho-analysis. He claims also that it is radical cure for hysteria. Even maniac-depressive insanity he considers is the distorted expression of long repressed sexual complexes, though he is disposed to qualify this to some extent by admitting that inherited mental instability may play a part. He asserts that all alcoholics and drug takers have a large sexual complex. Incidentally the author is evidently a believer in alcohol, as he says: "The daily ingestion of alcohol is conducive to general health and well being." He thinks that homo-sexuality (repressed) is the invariable foundation of paranoia, but admits that psycho-analysis fails as a method of treatment "because these patients have no insight"; this treatment fails also in *dementia præcox*. The author is consistently anxious to insist on the non-physical

origin of mental diseases and devotes only 10 pages to endocrine considerations and does not include epilepsy or *dementia præcox* among the diseases caused by or associated with diseases of the endocrine organs, because, he says, they are not related by heredity to diseases of the genital and adrenal glands, but to mental or cerebral maladies.

Nevertheless, he gives an excellent account of melancholia and also of *dementia præcox* and though treatment is not very greatly dilated upon, as a rule, he gives a good account of the treatment of melancholia and a full and up-to-date account of general paralysis of the insane and of attempts to treat it by intra-spinal and intra-cranial injections. His general conclusion as to the efficacy of these methods is not favourable.

The author seems to pin his faith to over-feeding and rest in bed and casts doubts on the advisability of one of the most usual panaceas of hospital treatment, namely, occupation, except in chronic cases. The author has very definite views on so-called eugenic remedies to heredity's ill effects, saying that those who advocate them, do not understand human psychology and that sterilization of the insane is not only anti-social interference, but totally unwarranted by our knowledge of the causation of mental disease.

The author speaks of his work as an elementary textbook, but it is far more than this and though its scope is perhaps a little over-extended, ranging from the neurone theory through normal psychology (116 pages) and psychology of the insane (74 pages) to description of the lunacy laws and procedure in England and methods of staining nervous tissue, it is full of food for thought and useful suggestions.

THE CONTROL OF MALARIA AND BILHARZIOSIS.

In our issue of January 17, 1920, we called attention to the steps taken by the Federal Quarantine Department in the endeavour to prevent the spread of malaria from returned soldiers to the general population. The Director of Quarantine has addressed a circular letter to the Departments of Public Health in the several States, dealing with this subject and with the work of combating the spread of bilharziosis. Dr. Cumpston refers to the fact that the Commonwealth Government does not possess legal powers of control over diseases such as malaria occurring among the general community. On the other hand, the Commonwealth Government does not seek to evade its responsibility. He therefore invites a co-operation between the State Departments and his own service in endeavouring to prevent the spread of the two named diseases. He recapitulates the main points embodied in his letter to the medical officers of the local committees established under the Department of Repatriation and emphasizes more particularly the necessity for a control of persons suffering from recurrent attacks of malaria. He offers to supply the State Departments with information concerning the occurrence of malaria among returned soldiers in any district within the State. In order to support any measures that may be taken in the endeavour to control malaria, he urges the responsible authorities in the several States to make malaria a notifiable disease and to adopt measures similar to those recommended to the Repatriation medical officers in regard to treatment and other means of control.

In connexion with bilharziosis, he states that approximately one hundred members of the Australian Imperial Force have returned to Australia after having been infected with this disease. Information, concerning these men is being prepared in a tabular form and will be made available to the Departments of Public Health. It is proposed to provide treatment for those men who are found to be infective. Moreover, it is stated that an effort will be made to obtain employment in sewerage areas for men who are infected and for those who are required to present themselves periodically for examination. It is suggested that information should be available in regard to any spread of the disease to the general community. For this purpose he asks the public health authorities to make both bilharziosis and hematuria notifiable. He also suggests that co-operation between the State Departments and his own Department should be instituted, with a view to the complete eradication of bilharzial infections.

¹ Read at a Meeting of the New South Wales Branch of the British Medical Association on November 28, 1919.

² Mind and Its Disorders: A Text-Book for Students and Practitioners of Medicine, by W. H. B. Stoddart, M.D., F.R.C.P., Third Edition; 1919. London: H. K. Lewis & Co.; Demy 8vo., pp. 580, with 81 illustrations. Price, 18s. net.

The Medical Journal of Australia.

SATURDAY, JANUARY 31, 1920.

The Law in Tasmania.

"An Act to amend *The Medical Act, 1918*, and for other purposes" was entered into the statute book of Tasmania on December 24, 1919. We publish the text of this astounding measure elsewhere. The full significance of this new Act will be gathered by reference to the principal Act, the text of which was published in *The Medical Journal of Australia* of October 12, 1918, pages 314 to 316. The "other purposes" referred to in the superscription would appear to be to prevent the Tasmanian Branch of the British Medical Association from maintaining the honour and interests of the medical profession in the island State. Whatever were the aims of the Government and Parliament, the effect will be that medical practitioners who value their reputation, will refrain from settling in Tasmania or from accepting appointments in the Government service.

The Act deprives the Medical Council of the power to remove from the medical register the name of a medical practitioner who has been convicted of a felony or misdemeanour or who has been guilty of infamous conduct in a professional respect. The Council can apply to the Supreme Court or to a judge to remove the name for either offence or on account of any fraud or fraudulent misrepresentation in securing registration. It will be noted that the right of appeal to the Full Court is granted to any person whose name has been removed from the register. Further, the manner in which evidence may be taken in the Supreme Court is specifically set out. The procedure for the removal of the name of a medical practitioner from the medical register would consequently be somewhat as follows. The Medical Council would investigate the circumstances and, if satisfied that the respondent had been convicted of a felony or misdemeanour, or was guilty of infamous conduct in a professional respect, or had obtained registration in Tasmania by fraud or fraudulent misrepresentation,

the Council would make an application by summons to the Supreme Court, setting forth the grounds on which the application was made and the chief points of evidence. The proceedings in the Supreme Court would be governed by the ordinary rules of evidence, although evidence might be taken on commission at any place outside the jurisdiction of the court. It is evident that the Government did not hesitate to frame these clauses to provide for a particular case. It will be remembered that in a previous issue of this journal we reproduced an article from *The Journal of the American Medical Association*, in which certain facts were recounted connected with the document on which one Victor Richard Ratten obtained registration in 1907. The Medical Council has been instructed by the Premier to investigate the allegations and these clauses have been drafted so that the Council would be prevented from pursuing the inquiry beyond the limits prescribed by the Government. So fearful was the Government that the inquiry might be continued to its logical conclusion, that is, that the genuineness or validity of the alleged diploma should be investigated, that a further clause was inserted into this measure to restrict this particular inquiry. The Government did not even attempt to cover the significance of this clause. The name of Victor Richard Ratten cannot be removed from the register of Tasmania unless it can be proved that the diploma was obtained by fraud or the registration was effected fraudulently. The Government prevented on the first occasion a full and adequate inquiry into the circumstances of the case. They have now endeavoured to limit the inquiry by this absurd measure.

The second item of importance in the Act is contained in clause 19a. Certain medical practitioners have disregarded the resolutions of their colleagues in connexion with the treatment of well-to-do persons in charitable institutions. These resolutions were in conformity with the declared policy of the medical profession throughout the British Empire and were based on sound argument. When a medical practitioner disregards the ethical standards of his profession, he must be prepared to abide by the consequences of his act. He cannot expect other practitioners to accord him professional recognition. The

Act insists that a medical practitioner may be compelled to meet any other medical practitioner in consultation, if called in for this purpose. The clause reveals the desire of the Government to hamper the Tasmanian Branch and its members. It is futile and stupid. No useful purpose could be served by a consultation between a member of the British Medical Association and a medical practitioner who holds his professional reputation so cheap that he accepts payment from a desperate Government to defy the ethical rules of the profession. If a member were actually called upon to meet a member of the medical staff of the Hobart General Hospital, he would be justified in refusing, on the ground that the patient could not be benefited in the absence of mutual confidence between the practitioners consulting. Willing professional intercourse with one of these medical practitioners would involve the member in the risk of expulsion from the British Medical Association, a risk a reputable practitioner would not care to take.

The third curiosity of the Act is to be found in clause 19b. In plain English, the Tasmanian Branch of the British Medical Association would render itself liable to a fine of any sum between £25 and £200 if it prevented or endeavoured to prevent a medical practitioner from applying or accepting a position in one of the public general hospitals. The Tasmanian Branch, while recognizing the absurdity of such a legislative provision, bowed to the law and instructed us to remove the notice on the last page of the *Journal*, which requests medical practitioners, before applying for certain positions to communicate with the Honorary Secretary of the Branch for information concerning the appointments. We obeyed the instructions of the Branch. The paragraph is superfluous, for there is not a medical practitioner in the Commonwealth who is not fully seized of the facts. The Government will find difficulty in obtaining the services of medical practitioners for their hospitals. The Act will open the eyes of every self-respecting doctor and will effectively prevent anyone from accepting such a position until it is repealed. It will be our duty to the medical profession in the Commonwealth to remind its members from time to time of the reasons why the medical positions in the Government hospitals in Tasmania are undesirable posi-

tions to hold. The Government of Tasmania has done its best by Act of Parliament to lower the status of the medical profession in the State.

HYDATID DISEASE.

Last week we published an important communication by Dr. C. E. Corlette in which he discusses in detail the question of the relationship between multilocular hydatid disease and ordinary hydatid disease. Dr. Corlette presents the record of a remarkable case of primary hydatid disease of bone, involving the ilium and the femur. The lesions in the bones were characterized by the presence of innumerable cysts of minute size and a smaller number of a larger size. The largest cysts were no bigger than a small cherry. The contents of the lesions had a granular appearance and the absence of scolices and hooklets was determined by microscopical examination. The bones were enormously eroded and invaded by the infiltration of the parasite. At the post mortem examination it was found that a similar aggregation of minute cysts had invaded the right lung and had produced a most unusual condition. Here, again, the absence of scolices and hooklets lends great interest to the type of disease. Dr. Corlette adduces argument which leads him to discard the theory, originally elaborated by Melnikow-Raswedenkow, that multilocular or alveolar hydatid disease is caused by a special type of parasite, differing in biological characteristics from the parasite of the ordinary form. He suggests that the small size of the cysts is determined by a mechanical restriction of the nutrition of the individual parasites. That increased pressure due to the overcrowding in the inelastic confines of bone is not the cause of the smallness of the individual cysts, as was taught by Virchow, is proved by the fact that smallness characterizes the cysts met with in other parts of the body. The crowding together of a very large number of cysts would necessarily lead to a limitation of their food supply and to the supply of blood through the vessels of the host. The envelope of the cysts was found to be extremely delicate. Dr. Corlette can scarcely be accused of speculation when he asserts that it would require but a slight degree of trauma to cause the rupture of the cysts and a consequent sowing of brood capsules

in the immediate neighbourhood of the burst cyst. He analyses from many points of view the method of spread to distant parts and bids his reader to apply a critical judgement before he accepts the various convenient, but somewhat speculative, qualities that have been attributed to the parasite of this form of echinococcus disease. The discussion is rich in ideas. Dr. Corlette has allowed himself to be carried from pertinent question to pertinent question in connexion with hydatid disease. His article re-opens the whole pathology and contains material for debate which should result in the definite establishment of facts in the place of theoretic doctrines.

Dr. Corlette questions the correctness of the teaching that there is more than one variety of parasite involved in hydatid disease. This doctrine was accepted by the late Sir Edward Stirling and Sir Joseph Verco on the basis of the arguments put forward by Melnikow-Raswedenkow. Before the profession can pass a final judgement, it will be necessary to learn whether Sir Joseph Verco has counter arguments to present, which would weaken the chain of evidence forged by Dr. Corlette, or whether he is prepared to reconsider his previous decision in the light of the facts marshalled in this interesting case record. The truth can be reached only by a process of careful analysis and of examination of the intricate problems involved from every point of view. As a piece of logical argument, Dr. Corlette's presentation of his interpretation of the manifestations claims attention and commands the utmost respect. If it contains a flaw, it is certainly not obvious. The step taken by Dr. Corlette in raising the issue is of great importance and whether he proves to be right or wrong, he has adopted a method which is scientific and admirable. A discussion must ensue and this discussion must be continued until those who have studied the pathology of hydatid disease with care, will arrive at a definite agreement. We invite the learned doyen of the medical profession in South Australia to re-enter the arena and to deliver his considered opinion on this interesting problem.

THE MEDICAL FACULTY OF PARIS.

No city in the world, not even London, has so many moods and so varied tints as Paris. The stranger who receives his first impressions of the grandeur of

the broad *Avenue des Champs Elysées*, of the stately beauty of the *Place de la Concorde* and of the enchantment of the *Jardin des Tuileries*, experiences a sensation of depression when he passes over the *Pont des Saints Pères* into the grey bustle of the *Boulevard Saint Germain*. The street is broad enough, it is true. There is the same recklessness of the drivers of motor and horse conveyances. There are the same types of pedestrians as on the northern shore of the Seine. But the change is undeniable. The greyness grows more sombre as he turns further south into the *Rue Monsieur le Prince*. A few steps further he enters another world. All traces of modern Paris, with its lightness and variegation, have disappeared. The vivacity of the commercial elements characteristic of the sombre area has suddenly given place to a substantial, old-day elegance and an environment redolent of learning and of historical reminiscence. He has reached the domicile of the Faculty of Medicine, ancient, conservative and pompous. In a triangle formed by the *Boulevard Saint Germain*, the *Rue Hautefeuille* and the *Rue de l'École de Médecine* there is a massive, delightful building of immense proportions. The artistic façade, designed by Gondoin in 1774, with its thirty-two columns adorned by works of acknowledge sculptural art by Berruer, forms the north-eastern front of this splendid home of medical education. The entrance into the great amphitheatre or lecture hall is guarded by a full-sized statue of Louis XV., standing a few paces before six massive stone columns bearing a handsome pediment. The court of honour gives access to the smaller lecture theatre, to the wonderful *Salle des Pas-Perdus*, to the gigantic library of the Faculty and to the *Musée Orfila*. The library contained more than 300,000 books, admirably catalogued, an *el dorado* for the research student; the museum contains master-pieces in the form of anatomical specimens.

On the other side of the *Rue de l'École de Médecine*, also triangular in shape, is the second half of the home of the Faculty. This part of the school is eminently modern. It is the so-called practical school of medicine and embraces the laboratories of the various departments, pathological anatomy, bacteriology, chemistry, histology, hygiene, experimental pathology, physiology, therapeutics, *et cetera*. There is a great lecture theatre, capable of accommodating two

thousand people and a pathological museum—*Musée Dupuytren*. In this situation is the only remnant of by-gone days, the ancient dining hall of the Cordeliers, preserved on account of its architectural beauty. Not that the new practical school is devoid of constructional charm—far from it. The student learns to love the spacious, well-constructed halls and laboratories, where he receives his inauguration into the fascinating edifice of science. In the school he is removed utterly from the atmosphere of Paris. It is a domain of learning, serious, entrancing, absorbing. He finds that the passage through the streets to one of the twenty-five affiliated hospitals and clinics is incapable of removing the spell or of destroying the atmosphere created in the historic precincts of the school.

It is said that an attempt was made in the days of Charlemagne to institute a course of instruction in medicine in Paris. These attempts did not take material shape until 1270 when a portion of the University was dedicated to medical science. The department was attached to the Faculty of Arts and was under ecclesiastic control and administration. The students were required to attain priesthood and frequently the graduated practitioner discarded his worldly profession for the monastic life. While the Church benefited to some extent by this arrangement or practice, it soon became apparent that it was detrimental to the suffering sick. It was then sanctioned that medical students would not be required to enter priesthood or to take monastic vows. At first, however, they retained many of the habits of the orders and were expected to obey the ecclesiastic laws applying to priests and monks. Celibacy was obligatory. In 1452 Cardinal d'Estouteville removed this barrier and from that time the medical student and medical practitioner were allowed to enjoy the freedom of the ordinary citizen. Four years later Jacques Despart presented the Faculty of Medicine with a gift of money to enable the quarters to be expanded. The school moved from the *Rue du Fouarre* to the *Rue de la Boucherie*. To-day the students' union or association occupies the same building that formed the home of the Faculty for three centuries. Some fifty years later a rival institution was established in close proximity to the Faculty. The *Collège de Saint Come* became the home of French surgery for a long period.

Ambroise Paré contributed to its renown and many surgeons of eminence of the sixteenth and seventeenth centuries saved the art of surgery from a decadence into which the science of medicine was falling. About the middle of the eighteenth century a splendid edifice was built for the newly-founded *Académie de Chirurgie*. At first this institution served a good purpose, but not for long. The teaching in surgery deteriorated, while the reputation of the medical teaching in the Faculty remained at a very low level. And then the Revolution came and swept aside with a ruthless hand all the rotten institutions which endeavoured to justify their continued existence by reference to their former utility. In 1792 the legal status of the Faculty and of the surgical establishments was removed. For two years no students were trained in Paris; the profession had sunk to a level of incompetence and inactivity and there was no one stout enough or great enough to save the wreck. Necessity again proved herself the greatest of teachers. Fourcroy saw the inevitable result of a continued absence of medical education and, with a perspicacity far in advance of his time, proposed to the Convention that a School of Health should be founded and housed in the buildings of the old *Collège de Chirurgie*. He introduced a course to contain theoretical and practical instruction and insisted on a general scientific, as well as a strictly professional, education. The students were given a fine library and within a short time the beginnings of the existing museums were laid. The site of the School of Health has been retained. In 1808 the buildings were transferred to the University and became the Faculty of Medicine, the seat of medical learning, which accords a second place to none. At first three hospitals opened their doors for clinical teaching to the students of the Faculty. The repair of the damaged machine was rapid and extensive. Out of the mire arose the great institution which has much to offer the world to-day. In a future issue, we propose to give a brief account of the arrangements which exist at the present time for post-graduate study in the Paris school. This information may be of value to Australian practitioners visiting Europe.

THE REACTION OF CULTURE MEDIA.

We have recently called attention to a report on the reaction of media published by a special com-

mittee appointed by the Medical Research Committee to investigate pathological methods.¹ In this report a strong recommendation was issued for the universal employment of culture media of standard reactions. It was pointed out that the older methods of preparation of culture media yielded very variable results in regard to reaction. The effect on the growth of bacteria was striking. When media of known reaction are used, uniform yields of bacterial growth can be expected. The Committee arrived at the conclusion that the colorimetric method of determining the hydrogen ion concentration was sufficiently accurate for bacteriological purposes. It would, however, be advisable for every modern bacteriologist to have mastered chemico-physical methods to a sufficient extent to enable him to understand exactly what he is measuring. Bacteriology depends largely on chemical and physical phenomena and the mere collection and identification of bacteria form but a small fraction of this science. Many observations have been made in the past on the rate of growth of bacteria in different media. Had these problems been attacked from a chemico-physical point of view, it would have been apparent that the change in the hydrogen ion concentration was one of the most important factors producing variations. The addition of blood to a medium has long since been found to favour the growth of certain bacteria. The effect of this addition is to a large extent due to the inclusion of neutral phosphates, which have the ability of dealing with a considerable quantity of free acid without any alteration of the reaction. Drs. E. A. Fennel and M. B. Fisher give an excellent description of the practical application of the colorimetric method of determining the optimum reaction of media for different organisms.² They point out that *B. typhosus*, *B. paratyphosus A* and *B* and many of the staphylococci have a wide range of selectivity and consequently the accurate standardization of the reaction of the media in which they are grown, is not of great importance. On the other hand the pneumococcus, the meningococcus, the bacillus of Pfeiffer, some of the streptococci and many of the strictly parasitic organisms have a narrow range and an accurate setting of the reaction is essential. For example, peptone broth, employed for the cultivation of pneumococci having a P_H of 7.8 before being sterilized in the autoclave, yields a consistently profuse growth. The addition of 0.5% of glucose to this broth produces a medium in which from 5,000 million to 7,000 million pneumococci to the cubic centimetre can be grown. The optimum reaction of broth for *Streptococcus viridans* is said to be from P_H 7.6 to 7.8. For the bacillus of Pfeiffer agar infusion with laked blood set to P_H 7.8 to 8.0 is necessary for reliable results. The best medium for the gonococcus is Vedder's starch set to P_H 7.4. The authors give information concerning the range and optimum reaction of media for a number of other bacteria, determined after careful experimentation. In claiming that all bacteriologists should use this method of standardizing the media employed, they give some practical hints which may be useful to the amateur chemist. Some of these hints appear

to us to be unwarranted, inasmuch as their employment removes the necessity of an intelligent application of knowledge indispensable for accurate work. This applies especially to the substitution for standard solutions of acid potassium phosphate and decinormal soda of weak acids and alkalis of unknown strength. The results obtained by Barnett and Chapman's method are reliable, but the reliance on this form of short cut is unjustifiable for a scientific worker. On the other hand, the method of overcoming the disturbing effect of the presence of a cloudy, coloured medium is valuable. The medium to be standardized is measured with great care into a chemically clean test tube, which has previously been washed out with some of the same medium. This tube is placed in a stand and immediately behind it is a test tube containing distilled water. To the medium is added a measured quantity of the indicator. They use phenol-sulphone-phthalein. In a similar test tube is placed the standard solution of salts having the desired hydrogen ion concentration and containing the measured quantity of indicator. In front of this test tube is a fourth test tube containing the medium without any indicator. When the amount of n/20 sodium hydrate necessary to produce the same colour as in the standard has been added to the broth in the first test tube, the matching is rendered possible by the fact that the observer can look through medium, colour indicator, distilled water and glass in both cases. The matching is carried out through holes in the stand placed opposite the pairs of test tubes. The authors refer to the effect of heating on the hydrogen ion concentration of solutions of lactose. There are many other points that must be worked out with care and accuracy in connexion with the reaction of culture media. Each bacteriologist will discover for himself the necessity of investigating these problems and setting up standards for his routine work.

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¹ The Medical Journal of Australia, December 20, 1919, p. 535.

² The Journal of Infectious Diseases, December, 1919.

Abstracts from Current Medical Literature.

ORTHOPÆDIC SURGERY.

(37) Penetrating Injuries of the Knee Joint.

When patients have to be transported after penetrating injuries to the knee joint, immobilization is essential, as great damage can be done by frequent movement. The track of the injury, the extent of the injury and the situation of the foreign body should be investigated. This can be done by having regard to the site of the pain, elicited on pressure over the track of the wound, by the results of inspection and by radiographic examination. If synovial fluid is discharging, it should be examined for micro-organisms. The author, H. C. Mitchell (*Illinois Med. Journ.*, November, 1919) divides these injuries into three classes. (1) Clean, perforating wounds, with fragment of metal or bullet passing completely through the joint or finding lodgement in the lower end of the femur or upper end of the tibia, inflicting trivial damage in the joint and the wound healing rapidly, with no evidence of inflammatory reaction. The treatment of this class is complete immobilization for about ten days. Excessive fluid should be evacuated. (2) Cases of penetrating or perforating wounds of the joint, with large apertures of entrance and exit, in which the foreign body is retained in the joint. In this class the limb should be kept immobilized until the radiographic examination has been made. The wounds, both of entrance and exit, should be carefully excised after the limb has been thoroughly prepared. All foreign bodies and dead tissue should be removed. If the synovial membrane is not badly mutilated, the edges are stitched to the skin and a drainage tube is put into the wound, not into the synovial sac. The synovial discharges should be watched and if streptococci or staphylococci are found, the wound should be drained freely, continuous irrigation with the Carrel-Dakin method being used, if necessary. (3) Cases of perforating or penetrating wound of the joint, with extensive intra-articular fracture, or destruction of one or more of the condyles. In treating this class of injury, great care should be taken not to sacrifice or damage the articular cartilages. If there is fracture of the joint surfaces or extensive loss on bone, excision of the joint is the better procedure. In the presence of severe infection the limb is placed on an open splint, with extension, so as to separate the ends of the bones; the wound is packed with iodoform gauze and treated with continuous irrigation after the Carrel-Dakin method until the wound is sterile. The bones are then fitted together and the wound allowed to heal. Extensive laceration, with injury of large vessels, or gas gangrene, with extensive fracture, is an indication for immediate amputation.

(38) Flail Joints of the Upper Extremity.

Flail joints occur in military surgery as a result of wide excision of the articular ends in the presence of infection and have also frequently followed excision performed for ankylosis. Loss of bone is the chief cause of the disability in these cases, in contrast to the flail joints seen in civil practice. In almost all cases of flail shoulders there was a loss of the head of the humerus to a line well below the tuberosity. The scapula was usually intact. The recognition of the presence of an active deltoid muscle and an estimation of possible future function are important factors in determining the type of operation. When there is a moderate degree of functions in the deltoid, joint stability should be possible, without the production of ankylosis, but Harry Platt (*Journ. Orthop. Surg.*, November, 1919) believes that in all cases fixation should be aimed at. The operation which he practises has for its object reconstruction of the head of the head of the humerus. It is done in two stages. In the first stage adherent scars are removed and the block of scar tissue between the scapula and the humerus is excised for bacteriological examination. In the second stage a large graft, shaped like a wooden mallet, is removed from the tibia. The handle of the graft is driven into the medullary cavity of the humerus and the wide upper end is brought into contact with the bare glenoid cavity. The limb is put up in 90° abduction and this position is maintained until stability has developed. In the elbow joint a number of different conditions are often present to alter the plan of treatment, but where possible the author has tried to bend the bone ends together by means of one or two stout slings taken from the *fascia lata*. The limb is afterwards slung in flexion at 45°. As the end result depends entirely on the development of muscular control, physio-therapeutic treatment is given, both before and after the operation.

(39) Stiff and Painful Shoulder.

A. J. Brown endeavours to demonstrate that a tear in the tendons of the *latissimus dorsi* and *teres major* muscles may be responsible for some of the cases of stiff and painful shoulder (*Surg., Gynec. and Obstet.*, October, 1919). The lesion is usually the result of trauma and at the time of occurrence the patient is conscious of a distinct snap followed by severe, sharp pain and loss of function in the whole upper limb. Movements of abduction and lateral rotation, particularly when performed as active movements, are extremely painful. There is, however, a small range of movement amounting to about 10° which is not painful and this is due to the fact that in this small range injured muscles are not placed on a stretch. Atrophy of the deltoid is often well marked. Tenderness may be present at the tip of the acromion process and in the type under discussion there is a point of tenderness on the inner surface of the humerus

high up in the axilla. The mechanism of the trauma is as follows: the patient, holding on to a strap in the tram or in some similar position which holds the arm in abduction, has his equilibrium disturbed and makes an effort to correct his balance by violently contracting his adducting muscles. Adduction cannot be effected and the result is an enormous strain on the adductors due to the fact that the body weight is abducting the arm, while the muscles are endeavouring the adduct. Atrophy of the deltoid is said to be due to the pressure of extravasated blood on the axillary nerve. The scar tissue which is formed, may permanently involve the axillary nerve or lead to contracture or disability of the muscles. Treatment in the acute stage is rest in a position to allow apposition of the torn edges of the tendons. The limb is adducted in a sling. Active movements within the limit of pain are performed in periods of 15 minutes three or four times a day and should be commenced on the day following the injury. Gentle massage should be applied daily to the injured part and to the surrounding muscles. In the sub-acute stage immobilization is not insisted upon, but the patient is encouraged to move the shoulder within the limits of pain. Vigorous massage is now advisable to promote a new blood supply. In the chronic stage the adhesions should be broken down under an anæsthetic and the shortened muscles stretched. The later treatment is the same as that described for the acute stage.

(40) An Operation for "Claw Foot."

From the study of radiograms of claw feet, Russell A. Hibbs (*Journ. Amer. Med. Assoc.*, November 22, 1919) concluded that this deformity takes place chiefly at the articulation between the talus and the navicular. On account of the exaggerated arch there may appear to be a downward displacement of the *os calcis*, but this is not the case. In treating this deformity there are two problems to be solved: (1) the correction of the exaggerated arch, (2) the removal of the deforming power on the toes of the common extensors and the conversion of these muscles into dorsiflexors of the foot. The first problem is met by making an excision 3.75 cm. long on the medial aspect of the heel and exposing the *os calcis* by separating the plantar structures from their attachment to the bone. Force is then used to elevate the anterior part of the foot and thus to correct the deformity. Secondly, the common extensor tendons and cuneiform bones are exposed through a curved excision, 7.5 to 10 cm. long, on the dorsi-lateral aspect of the foot. The tendons are divided as far to the distal side as possible and their proximal ends passed through a tunnel in the lateral cuneiform bone and sutured with chromic gut. The incision is closed with subcutaneous and skin sutures. Plaster is then applied with the metatarsal bones in corrected position and the toes straight and a thick

felt pad is inserted under the sole. The plaster is worn for five weeks, when it is removed daily for exercise and massage. After seven weeks the patient is permitted to walk without plaster, though massage and exercise are continued for six weeks longer. The importance of not lengthening the *tendo Achillis* at this time is emphasized. Its resistance is a great aid in correcting the *cavus*.

(41) A Cause of Backache.

A case is described by J. R. Laviere (*Illinois Med. Journ.*, October, 1919) in which pain in the lower back had persisted for fourteen years. The subject was a strong, muscular man. The pain was more severe on the right side and was accentuated by leaning to the right or backwards. Palpation showed a definite tender area, half way between the spine of the fifth lumbar vertebra and the posterior border of the ilium on the right side. X-ray examination showed a long, right transverse process of the fifth lumbar vertebra. This process was removed at operation with a small chisel after care had been taken to free it of all muscle and periosteum. Two weeks later the patient left the hospital quite relieved and has remained well since.

MORPHOLOGY.

(42) Growth of Amphibia After Thyroidectomy.

Since April, 1916, E. R. and M. M. Hoskins have been working out problems associated with the removal of the thyroid *Anlage* from amphibia. The operation was performed on the larvæ just before the beginning of the circulation of the blood, as then there is no hæmorrhage and the chances of regeneration of the tissues removed are less. Moreover, the gland has not yet become functional. Their results are recorded in the *Journal of Experimental Zoology* (August 20, 1919). It was found that if the operation could be performed without injury to the sub-maxillary muscles, with consequent inanition, owing to difficulty in eating, the thyroidless larvæ grow more rapidly and often become twice as large as the normal larvæ at the time when the latter reach their maximum size. Ultimately they become more than three times as large as the controls. They do not undergo metamorphosis, even if kept alive for a year after metamorphosis of the controls. This is attributed to faulty metabolism, especially of calcium, since one of the most striking effects of thyroid removal is a deficiency in calcification and ossification of the skeleton. They retain the power of regeneration of lost parts to a limited extent for more than a year at least. The brain growth is slower, both actually and relatively. It differentiates slowly and becomes ultimately much larger than the fully differentiated normal brain, although still only partly differentiated. The liver becomes relatively very large and tends to assume the mature shape, but never quite differentiates, because a coil of

gut is half embedded in it. The hypophysis undergoes hyperplasia and this possibly accounts for the rapid growth of thyroidless larvæ. The thymus persists in older thyroidless larvæ. The parathyroids are not affected until after metamorphosis of the controls, when they become relatively large, as do the kidneys and spleen. The interstitial gills persist, but the lungs become functional as well. The intestine becomes long and retains its larval character. The ovaries are large and oocytes develop in them, but the oviducts do not develop; for this reason the larvæ cannot reproduce. The testes become fully mature and produce spermatozoa, which escape into the kidneys. Synapsis in the testes is hastened in point of time by thyroidectomy.

(43) The Effects of Inbreeding on the Body Weight.

Helen Dean King presents a fourth contribution on the subject of inbreeding in albino rats in the *Journal of Experimental Zoology* (August 20, 1919). As a whole, the experiment has shown that the closest form of inbreeding possible in mammals, the mating of brother and sister from the same litter, is not necessarily inimical, either to body growth, to fertility or to constitutional vigour, provided that only the best animals from a relatively large number are used for breeding purposes. It has been shown that adverse conditions of environment and of nutrition produce far more detrimental effects on growth and fertility in the albino rat than does inbreeding. Those factors apparently do not alter the genetic constitution of the individual, since the animals resume their normal growth and fertility when environmental and nutritive conditions are again favourable. The sex ratio in the rat is seemingly a character that is amenable to selection, since through this process the inbred strain has been separated into two lines, one showing a high sex ratio, while the other is low. This effect seems to be limited, as there has been no cumulative effect of the selection, although the two lines have been kept distinct for eighteen successive generations. Close inbreeding for 25 generations has not altered the growth graph for the albino rat to any extent.

(44) The Effects of Lesions of the Thalamus in Decerebrate Pigeons.

F. T. Rogers presents the third of his studies on the brain stem (*Journ. Comp. Neurology*, October 15, 1919). In a previous study of decerebrate restlessness in the pigeon differences in behaviour were noted, according to whether or not the thalamus was traumatized in the process of decerebration. In the present series of experiments the thalamus was destroyed by cauterization after decerebration. The points noted were as follows: The temperature regulating mechanism of the pigeon is destroyed, so that its body temperature is determined by that of the environment. As the body temperature fluctuates, the behaviour and reflex activities vary. If it be kept normal, the behaviour of the bird re-

sembles that of the decerebrate bird without thalamic injury, except that it has a shorter life after operation. There is a tendency for stasis of food in the gastric cavities, associated very frequently with vomiting. If the body temperature be allowed to fall, a gradual depression of reflex activities ensues. Walking movements do not occur if the body temperature falls below 38° C. Equilibrium apparently remains normal down to 36°. At 33° a characteristic tonic flexion of the toes occurs and the animal cannot carry on the balancing movements involved in perching. As the body temperature declines, the nystagmus reactions of the eye become more and more sluggish and disappear at 30°. Intersegmental reflexes persist down to 31°. As the body temperature is raised, these phenomena return again.

(45) Evidence of Germ-Cell Selection.

C. H. Danforth has conducted a very exhaustive enquiry into the question as to whether germ-cells are subject to selection on the basis of their genetic potentialities and gives his results in the *Journal of Experimental Zoology* (Vol. 28, No. 3, July 5, 1919). The question first arose during the course of some experiments in which Mendelian characteristics were being investigated in poultry. Pearl in his experiments has indicated that inhaled alcohol affects germs cell differently according to their vitality; in the case of the fowl he believes that maximum treatment with alcohol results in an elimination of weaker germs with a consequent rise in the average vigour of the chicks actually produced. The author has made use of Pearl's methods and researches in an attempt to extend the enquiry into characters not known to be directly dependent on inherent vitality. In the experiments a cross was made between normal pure-bred stock and hybrid, heterozygous birds. The hybrids were subjected for certain periods to two daily treatments with alcohol vapour, during which time all eggs laid were incubated. As an index of any selection that might occur, the relative proportion of certain traits, brachydactyly, polydactyly and white colour, appearing in the offspring produced during periods of treatment was compared with the proportion of these traits produced during control periods. The results indicate that with at least some traits selection is possible and that it is more rigorous, the more severe the treatment. Since it appears that germ cells with different genetic potentialities react differently under certain artificially produced condition, a possibility of far-reaching importance is suggested; that even under normal conditions the genes which determine the genetic potentialities of a germ cell may have a real survival value for that cell and, moreover, that the prevalence of certain traits, appearing in the adult, may be in the final analysis largely regulated by the advantages or disadvantages that the determiners for such traits confer upon the germ cells in which they chance to be lodged.

British Medical Association News.

SCIENTIFIC.

A meeting of the New South Wales Branch was held at the B.M.A. Building, 30-34 Elizabeth Street, Sydney, on November 28, 1919, Dr. F. P. Sandes, the President, in the chair.

Dr. Laurence H. Hughes read a paper entitled "Some Experiences in the Commoner Tropical Diseases in (late) German New Guinea" (see page 97).

Dr. F. Guy Griffiths congratulated Dr. Hughes on his useful contribution. Referring to the experience of the members of the Australian Army Medical Corps, he stated that there were many cases of malaria in which all attempts to demonstrate the parasite proved futile. In reference to the treatment of malaria, he pointed out that intravenous injections of quinine were found to be very useful. This method was employed when it was desired to obtain a rapid action of the drug. Intramuscular injections were given, if quinine induced vomiting. He asked Dr. Hughes why he advocated the use of the sulphate. The majority of those who had had considerable experience in tropical diseases, preferred the bi-hydrochloride, especially for oral administration. Before leaving this subject, he stated that as early as 1903 Dr. Stacy and he had given quinine intravenously in exceedingly virulent forms of malaria at the Sydney Hospital. They had obtained satisfactory results.

Turning to the question of dysentery, he stated that the amebic form was apparently common in New Guinea. In Egypt the bacillary form was sixteen times more frequent than the amebic. He related his experience of the effect of antitoxic serum in clearing up these infections. One patient, who had been passing 100 stools in 24 hours, was able to return to the lines eleven days after the treatment was instituted. They gave a single dose of 30 c.cm. of castor oil. Later the sulphate of magnesia or the sulphate of soda was used for the purpose of washing the bowels out from above downwards. The sulphate of soda could be used for this purpose in doses of 4 grm. every hour for 16 hours. Cases of malarial dysentery were neither numerous nor uncommon.

Dr. R. Gordon Craig referred to the danger associated with the sequelæ of tropical diseases acquired on active service. He had experience of cases of tropical abscess, in which the patient had been unaware that he had sustained an infection abroad. Dr. Gordon Craig discussed the differential diagnosis of malaria and dysenteric abscess of the liver. In many cases the hepatic abscess was not associated with pain when the perihepatic tissues were not involved.

Dr. F. P. Sandes agreed with Dr. Gordon Craig that it would be necessary to remember the possibility of tropical infections when dealing with obscure conditions, either in returned men or in those who had not been outside the Commonwealth. He mentioned that a short time previously he had been consulted by a patient with a tropical liver abscess. This patient had been wandering about New South Wales and the condition had apparently not been recognized. He had attacks of fever of a few days' duration. There was relative eosinophile leucocytosis. He was treated by tapping and the administration of emetine and did quite well.

In his reply, Dr. Hughes agreed that intravenous medication with quinine was useful, although he had not employed it. On the other hand, he found that persistent vomiting was rare and that, after a day or two, the patients could usually retain quinine given by the mouth. They had found that the sulphate of quinine was satisfactory. The bi-hydrochloride had not been used, because the supplies were small. It was by no means uncommon to search in vain through blood smears for malarial parasites when the diagnosis was not in doubt. He had been pleased to hear the remarks by Dr. Craig and Dr. Sandes. He had seen only one case of liver abscess in which pain was absent.

Dr. S. Harry Harris read a paper on "The Resection of Impassable Urethral Stricture" (see page 99).

Dr. J. Flynn proceeded to demonstrate a few anatomical points in the male perineum, which facilitated the exposure of the proximal portion of the urethra or helped to expose it with the least amount of trauma and hemorrhage. The operation consisted of four distinct stages: (a) exposure of a portion of the urethra proximal to the stricture; (b) ex-

posure of a portion of the same tube distal to the stricture; (c) excision of the strictured region and (d) suture of the distal end with the proximal end after the two free ends had been somewhat mobilized. The urethra was left without any additional sutures; a catheter was inserted into the bladder through the membranous-prostatic urethra, the restoration of the urethral tube being left entirely to natural causes. The conception of the operation, which, to all intents and purposes, was a new procedure, was due to Dr. Hamilton Russell. It was suggested by him by reflections on hypospadias. In penile hypospadias a condition existed resulting from the non-development of the floor of the urethra. This condition was somewhat analogous to the normal condition in the penis, where the genital furrow did not close but persisted as the vestibule of the vagina. In other words, the floor of the spongy portion of the urethra was absent, but the prostatic and membranous portion were intact, being derived from an altogether different structure, the urogenital sinus. It would not be straining matters to say that Mr. Russell's operation put the urethral tube, or rather the urethral "riband" as it stood after the operation, in the primitive condition in which every urethra passes in its evolving stage. In both conditions the urethral tube might be considered as resulting from the natural folding together of the sides of the "riband."

Dr. Flynn stated that the portion of the urethra distal to the stricture could be exposed by the use of Wheelhouse's sound or a similar instrument. The portion of the urethra proximal to the stricture could best be exposed by attending to the routes which Dr. Flynn indicated in some diagrams. He pointed out two well-marked spaces, which had been called by the French anatomists *les espaces decollables*. The walls of these spaces were easily separable from each other. An entrance into these spaces, which were called the retrobulbar and the retroprostatic, was effected by the severance of a small muscular bundle. The retrobulbar space was reached by severing the ano-bulbar *raphé* and the retroprostatic space was reached by severing the recto-urethral muscle of Rous, which ran from the angle at the junction of the anal canal and rectum to the membranous urethra. A concave incision, with its concavity directed backwards, was carried across the perineum through the skin and subcutaneous tissue from ischium to ischium on either side at a distance of about two fingers' breadth from the anus. On pushing the lips of this incision apart, the bulb covered by the bulbo-cavernosus muscle came into view in front and the *sphincter ani externus* behind the ano-bulbar *raphé* was divided. As the bulb was drawn forward it was well to note and define the posterior margin of the transverse perineal muscle. The posterior margin of the wound was drawn backward and the anterior margins of the *levator ani* muscle were localized. They were united somewhat like a horseshoe by their prerectal portion. By pulling these backwards and outwards with the index finger on each side, the median partition which connected the rectum and the membranous portion of the urethra, was made to stand out in bold relief. The recto-urethral muscle was contained in this partition and when it was severed no further difficulty was experienced in opening the recto-prostatic space without additional trauma. If the recto-urethral muscle was not rendered taut, an operator not forewarned might injure the rectum instead of reaching the retroprostatic space. The recto-urethral muscle was best severed in a plane corresponding to the posterior margin of the urogenital diaphragm or triangular ligament. When the posterior portion of the urethra was opened up in the manner described, by the severance of the recto-urethral muscle and the pulling back of the *levator prostatae*, drainage of the bladder by means of a catheter passed into the prostatic portion of the urethra would prevent any urine escaping into the anterior portion, which was purposely left open.

Dr. R. Gordon Craig referred to the brilliant contribution that Mr. Hamilton Russell had made to world surgery. He congratulated Dr. Harris on his interesting paper. He asked him whether he had encountered excessive hemorrhage from the *corpus spongiosum* when excising the scar of the stricture. He agreed with Dr. Flynn that it was important to recognize the embryological condition of the parts. In practice, however, the surgeon occasionally met with unexpected difficulties. He referred to a case of prolapse of the rectum. There was a hernia of the anterior

wall, through the posterior prostatic pouch. He had attacked the condition anatomically from above and inserted his finger between the rectum and the prostate into the embryological cavity, which had become persistent. He obliterated the cavity by suturing. He feared that they had not reached the standard of excellence that Dr. Flynn considered necessary for these operations. In the majority of cases it was necessary to enter by the back door.

Dr. F. P. Sandes agreed with Dr. Harris that it was advisable in many cases to open the bladder and to pass a sound down the urethra as far as the stricture. Apart from the advantages of greater simplicity of technique, the surgeon was enabled to drain the bladder more effectively, especially when the vesical wall was thickened and the mucous membrane altered by a septic infection.

Dr. Harry Harris maintained that it was not always possible to carry out the operation from below. Moreover, he held that it was inadvisable to attempt it in septic cases. The results, he was convinced, would not be satisfactory. He referred to the fact that Mr. Hamilton Russell carried out some of his operations without a suprapubic cystotomy. In regard to the question of hemorrhage, he stated that it was necessary at times to insert a stitch around the artery of the bulb.

Dr. W. F. Litchfield read two papers; one on the value of von Pirquet's reaction for tuberculosis in children (see page 101) and the other on recovery in a case of influenzal meningitis in a child (see page 104).

Dr. F. Guy Griffiths was glad to hear Dr. Litchfield revive Littlejohn's work. He pointed out that in Europe (e.g., Vienna) tuberculosis was probably about five times as frequent as it was in Australia. He regarded the tuberculin test as quite reliable in children, even after the age of two years. At times the test was positive after the individual had ceased to suffer from tuberculosis. The advantage of a subcutaneous tuberculin test was that a general and a focal reaction were obtained when the disease was active. The site of the diseased process could be determined from the focal reaction.

Dr. R. Gordon Craig was not prepared to admit that tuberculosis was less widespread in Australia than elsewhere. The conditions in Australia, however, were very favourable and the patients appeared to have a better chance than in other countries. He had seen very little amyloid disease in Australia. He asked Dr. Litchfield whether amyloid degeneration had been met with frequently in the post-mortem room of the Children's Hospital.

Dr. Selwyn Harrison referred to the results of the von Pirquet test applied in America and recorded by Beeler and Johnson, of St. Louis. During the first year of life 1.5% of the children yielded a positive reaction. In the second year the reaction was positive in 5%, while from the second to the fourth year it was positive in 15%. In children between five and fifteen years a positive von Pirquet test was obtained in over one quarter. Nearly 80% of the persons tested after the age of 15 gave a positive response. It was obvious that the test did not necessarily indicate active disease. It had been stated, however, that when the maximum intensity of the reaction developed within 24 hours, there was strong presumptive evidence that the disease was in an active condition. If this proved to be true, the diagnostic value of the test would be greatly increased. Dr. Harrison's own views were that the subcutaneous tuberculin test was the ideal test for adults, while the von Pirquet test was the ideal test for young children. It should, however, be remembered that almost every individual, young or old, gave a reaction in response to a large dose.

Dr. D. Luker held very strongly that much of the criticism directed against the von Pirquet test was due to departures in technique. Not every skin test was a von Pirquet test. The skin should be abraded as far as the lymph layer, but the capillary layer should not be reached. He considered it essential that von Pirquet's original technique should be accurately followed. His experience had taught him that if the test were properly carried out, it would be found that the disease was not infrequent in Australia. He had formed the opinion that tuberculosis in adult life was largely a relighting up of infantile infections.

In his reply, Dr. Litchfield stated that amyloid disease was very rare in Sydney. He had seen only one case at the

Royal Prince Alfred Hospital and no cases at the Children's Hospital. He thought that the development of a marked reaction within the next 24 hours was an indication of active disease. Littlejohn had held that a faint reaction was frequently associated with severe types of tuberculosis. In regard to the technique, he was always careful to scratch through the epidermis without drawing blood. The most valuable control of the test was the following up of cases. In comparing the significance of the subcutaneous test with that of the von Pirquet reaction, he pointed out that the latter could be applied in all circumstances, while the patient had to be afebrile for the safe performance of the former. He agreed with Dr. Luker concerning the infection in infancy.

Dr. R. B. Wade read a paper on conditions that simulate tubercular disease of the hip (see page 102).

A short discussion followed.

The following notice has been issued by the Council of the South Australian Branch to the members at the request of the Dean of the Faculty of Medicine of the Adelaide University. There is at present no obstetric ward in the Adelaide Hospital. The only provision for the care of women during parturition, apart from the private hospitals, is the Queen's Home. This Home, however, was until recently reserved for married women in reduced circumstances. Unmarried women are now admitted, but are supposed to be kept in a separate ward. The Home, however, is situated a considerable distance from the Adelaide Hospital and is not readily accessible to students. In these circumstances, the necessity for the establishment of a pre-maternity clinic, for the revival of an external midwifery department and for the opening of an obstetric ward has become urgent. We understand that the department will develop within a relatively short time.

The Dean of the Faculty of Medicine, Adelaide University (Sir Joseph Verco) has asked the Council to make known to the members of the South Australian Branch of the British Medical Association the fact that the Board of Management of the Adelaide Hospital has decided to revive the Extern Midwifery Department at the Adelaide Hospital and to establish in connexion with this a prematernity clinic, where pregnant women will be encouraged to report and be systematically examined and to keep under supervision during their pregnancy. It has been suggested that practically every medical man attends a certain number of charity midwifery cases each year and would be glad to know that an extern midwifery department is in existence at the Adelaide Hospital. This extern midwifery work is especially the type of experience that is lacking in the training of our students.

At present the regulations state that the patient must reside within 1½ miles of the hospital. The prematernity clinic will be started in January, 1920, and will be held each Friday at noon, and patients who wish to be attended in their confinement at their own home as extern patients from the hospital must attend at the out-patients department on one of these days for registration and examination. Such attendance should take place as early as possible during pregnancy; it is suggested by the sixth month, when instructions re later attendance will be given to the patients. Naturally, it is intended that only those patients who are not in a position to pay outside medical fees will be eligible for attention from the Adelaide Hospital.

THE MEDICAL ACT OF TASMANIA.

The following is the text of the *Medical Act Amendment Act, 1919*, of Tasmania, which received assent on December 24, 1919:—

An Act to Amend "The Medical Act, 1918," and for Other Purposes.

Be it enacted by His Excellency the Governor of Tasmania, by and with the advice and consent of the Legislative Council and House of Assembly, in Parliament assembled, as follows:

1. This Act may be cited as *The Medical Act, 1919*, and shall be incorporated with and construed as one with *The*

Medical Act, 1918, in this Act referred to as the Principal Act.

2. Subsection (2) of Section Two of the Principal Act is hereby amended, as from the commencement of that Act, by inserting at the commencement of that subsection, after the figure "(2)," the words "subject to Section 15d of this Act."

3. Section Nine of the Principal Act is hereby amended by inserting at the end thereof the following words: "The absence of the name of any person from such copy of the register shall be sufficient evidence until the contrary is shown that such person is not registered according to the provisions of this Act."

"Provided that in the case of any person whose name does not appear in such copy, a certified copy under the hand of the President or Secretary of the Council of the entry of the name of that person on the register shall be evidence of the contents of the register with respect to that entry."

"For the purposes of this section all courts of law, justices and all boards and persons having by law or by consent of parties, or by virtue of a Royal Commission, authority to hear, receive and examine evidence or to make an enquiry, shall take judicial notice of the official signature of every person who holds or, since the commencement of this Act, has held the office of President or Secretary of the Council, and of the fact that such person holds or has held such office, if the signature purports to be attached or appended to any certificate or any official document or memorandum."

4. Sections Twelve and Thirteen of the Principal Act are hereby repealed.

5. After Section Fifteen of the Principal Act the following sections are hereby inserted:—

"15a. Wherever in any other Act now or hereafter in force, or in any other instrument, the expression 'legally qualified medical practitioner' or 'duly qualified medical practitioner' is used, such expression shall hereafter, unless a contrary intention clearly appears, be deemed to mean a person registered under this Act."

"15b. (1) Any person desiring to be registered shall submit to the Council proof of the qualification upon which he relies."

"(2) If not satisfied that the applicant is entitled to be registered the Council may refuse the application or adjourn the same for further consideration."

"15c. (1) If any person who applies for registration is dissatisfied with the decision of the Council, it shall be lawful for him, by motion to the Supreme Court, within three months of the giving of such decision, to apply to such Court for an order directing the Council to register him."

"(2) The Court, or a judge thereof, may order that the person applying be registered, or that he be registered conditionally or upon terms, or may decline to make such or any order."

"15d. The name of any person—

"i. Whose registration (whether under or by virtue of this Act or any Act hereby repealed) has been obtained by fraud or fraudulent misrepresentation; or

ii. Who, either before or after his registration, has been convicted of any felony or misdemeanour, or of any offence which, if committed in the State, would be a felony or misdemeanour; or

iii. Who has been guilty of any infamous conduct in any professional respect—

may be removed from the register by order of the Supreme Court or a judge thereof, on application by summons taken out in that behalf by the Council. Such summons shall state the grounds of the application and give reasonable particulars of the charge made. Such person shall upon the removal of his name cease to be registered: Provided that the name so removed may be restored by order of the Supreme Court or a judge thereof and thereupon such person shall again be a registered person."

"Every person whose name shall have been removed by order of a judge of the Supreme Court shall have a right of appeal to the Full Court against the order. Notice of appeal shall be given within three weeks after the entry of the order and shall state the grounds of such appeal."

"In any proceeding in the Supreme Court under this section the court or a judge thereof may by order direct that a commission do issue for the examination of witnesses on

oath, *vivâ voce*, at any place out of the jurisdiction and the provisions of Division I. of Part II. of *The Evidence Act, 1910*, shall accordingly apply."

"Evidence taken within the State shall be taken *vivâ voce*."

"15e. Every person, for the removal of whose name any such application shall be made, shall have the right to have the truth of disputed matters of fact determined by the verdict of a jury in like manner as issues in actions are tried in the court in its ordinary jurisdiction."

"Questions of fact to be tried by the jury shall be stated in writing and in case the parties fail to agree upon such questions, the same shall be settled by a judge prior to the hearing."

"15f. The name of any present member of the staff of the Launceston General Hospital, or the Hobart General Hospital, or of any other State-aided hospital in Tasmania, shall not be removed or erased from the register on account of anything done or omitted by them in obtaining their diplomas and obtaining registration in Tasmania, unless in case of fraud on their part in connexion with such matters or any of them."

6. After Section Sixteen of the Principal Act the following section is hereby inserted:—

"16a. Unless he is registered under this Act, it shall not be lawful for any person for fee or reward, or in expectation of receiving a fee or reward, to practice as a physician or surgeon or prescribe to be taken or administer any medicine or do or perform any surgical act or operation; and every unregistered person so offending shall forfeit and pay a sum not exceeding fifty pounds, to be recovered in a summary manner."

7. Section Seventeen of the Principal Act is hereby amended by omitting the proviso thereto.

8. After Section Eighteen of the Principal Act, the following section is hereby inserted:—

"18a. It shall not be lawful for any person to sign any certificate of cause of death required by Section Thirty-four of *The Registration of Births and Deaths Act, 1895*, to be given by a medical practitioner, unless he is a person registered under this Act; and every unregistered person so offending shall forfeit and pay a sum not exceeding twenty pounds, to be recovered in a summary manner."

9. After Section Nineteen of the Principal Act the following sections are inserted:—

"19a. (1) If any registered medical practitioner in active practice without reasonable excuse (the proof of such reasonable excuse being upon him) refuses or fails to consult with or render professional assistance, in consultation, to any other registered medical practitioner seeking such advice or assistance, he shall be guilty of an offence and shall on conviction forfeit and pay for each offence a penalty of not less than fifty pounds nor more than two hundred pounds."

"The foregoing expression, 'reasonable excuse,' shall not include any resolution or bye-law or any agreement of any company, association or body of persons whatsoever, whether verbal or written."

"(2) The registered medical practitioner seeking any such advice or assistance as hereinbefore mentioned shall in every case be legally liable to pay to the registered medical practitioner rendering such advice or assistance a fair and reasonable fee (including expenses if any therefor), and shall if requested to do so pay such fee in advance."

"19b. Any person, association, company or body of persons who, directly or indirectly, prevent or endeavour to prevent, or aid in preventing in any way whatsoever any medical practitioner, nurse or other person applying for, accepting or holding any appointment or position in any State-aided hospital or charitable institution, shall be guilty of an offence and shall on conviction forfeit and pay for each offence a penalty of not less than twenty-five pounds, nor more than two hundred pounds."

10. After Section Twenty-one of the Principal Act the following section is inserted:—

"21a. The Supreme Court or a judge thereof, making or declining to make an order in any matter under this Act, may make any order and give any directions as to the costs thereof which it or he thinks proper."

11. The Second Schedule to the Principal Act is hereby amended by omitting from Paragraph iii. thereof the words "the State in which such medical college is situated" and substituting therefor the words "one of the States of the United States of America."

Naval and Military.

The following information concerning the appointments, promotions, etc., of medical officers attached to the naval and military services are reproduced from the *Commonwealth of Australia Gazette*, Nos. 4 and 5, of January 16 and 22, 1920:—

Permanent Naval Forces of the Commonwealth (Sea-Going Forces).

TERMINATION OF APPOINTMENTS.

The temporary appointments of the following officers are terminated as on the dates shown, on demobilization:—

- Temporary Surgeon-Lieutenant John Smith, M.B., 24th October, 1919.
- Temporary Surgeon-Lieutenant Guy Austin London, M.B., Ch.B., 9th November, 1919.
- Temporary Surgeon-Lieutenant Kevin Byrne, M.B., Ch.M., 19th November, 1919.
- Temporary Surgeon-Lieutenant Arthur Neville St. George Burditt, M.B., B.Sc., 21st November, 1919.
- Temporary Surgeon-Lieutenant Francis Temple Grey, M.B., 20th December, 1919.

Citizen Naval Forces of the Commonwealth. Royal Australian Naval Brigade.

RESIGNATION.

The resignation of Frederick Samuel Thomas, M.B., of his appointment as Surgeon-Lieutenant and Sub-District Naval Medical Officer, Maryborough, Queensland, is accepted, dated 1st September, 1919.

Australian Imperial Force.

APPOINTMENTS, PROMOTIONS, ETC.

First Military District.

- Major (temporary Lieutenant-Colonel) E. E. Brown, Australian Army Medical Corps, relinquishing the temporary rank of Lieutenant-Colonel and being granted the honorary rank of Lieutenant-Colonel, 14th July, 1919.
- Major (temporary Lieutenant-Colonel) S. H. Seccombe, Australian Army Medical Corps, relinquishing the temporary rank of Lieutenant-Colonel and being granted the honorary rank of Lieutenant-Colonel, 2nd August, 1919.

Second Military District.

- Captain (temporary Major) J. G. M. Beale, Australian Army Medical Corps, relinquishing the temporary rank of Major and being granted the honorary rank of Major, 24th February, 1919.
- Captain E. Tyrie, Australian Army Medical Corps, to be temporary Major, 11th July, 1919.
- Captain (temporary Major) W. R. Young, Australian Army Medical Corps. (The notification regarding this officer which appeared in Executive Minute No. 807, promulgated on page 1696 of *Commonwealth of Australia Gazette*, No. 127/19, is cancelled.)

Third Military District.

- Captain (temporary Major) E. N. Bateman, Australian Army Medical Corps, relinquishing the temporary rank of Major and being granted the honorary rank of Major, 14th July, 1919.
- Major S. C. Fitzpatrick, M.C., Australian Army Medical Corps, having resigned, his appointment in the Australian Imperial Force is terminated in England on 26th September, 1919, but to take effect from 25th November, 1919.
- Captain J. C. Nicholson, Australian Army Medical Corps, having resigned, his appointment in the Australian Imperial Force is terminated in England on 23rd September, 1919, but to take effect from 31st October, 1919.
- Lieutenant-Colonel H. H. Woollard, Australian Army Medical Corps, having resigned, his appointment in the Australian Imperial Force is terminated in England on 24th September, 1919, but to take effect from 23rd November, 1919.

Fourth Military District.

- Captain H. W. Davies, Australian Army Medical Corps, having resigned, his appointment in the Australian Imperial Force is terminated in England on 23rd September, 1919, but to take effect from 23rd October, 1919.
- Captain (temporary Major) G. S. Shipway, Australian Army Medical Corps, relinquishing the temporary rank of Major and being granted the honorary rank of Major, 2nd August, 1919.

APPOINTMENTS TERMINATED.

First Military District.

- Major E. S. Meyers, 27th November, 1919.
- Captain F. G. Power, 29th October, 1919.
- Captain C. H. Clatworthy, 27th October, 1919.
- Captain R. Power, 11th October, 1919.
- Captain D. Aiken, 8th December, 1919.

Second Military District.

- Lieutenant-Colonel V. W. Savage, D.S.O., 29th October, 1919.
- Major A. H. W. a'Court, 19th November, 1919.
- Major C. V. Single, D.S.O., 27th November, 1919.
- Major S. R. Stafford, 9th November, 1919.
- Major A. E. Aspinall, 25th November, 1919.
- Major C. M. Samson, M.C., 31st December, 1919.
- Captain C. P. Rosenthal, 30th November, 1919.
- Captain D. I. R. Smith, 14th November, 1919.
- Captain S. A. Railton, M.C., 29th November, 1919.
- Captain R. K. Rae, 3rd November, 1919.
- Captain D. W. McCredie, M.C., 7th October, 1919.
- Captain A. M. Purves, M.C., 9th October, 1919.
- Captain F. G. Griffiths, 8th November, 1919.
- Captain A. E. Woodward, M.C., 8th October, 1919.
- Captain E. M. McCaffrey, 30th December, 1919.
- Captain A. N. Yuille, 19th November, 1919.
- Captain C. G. Allen, 25th December, 1919.
- Captain A. J. Hope, 7th December, 1919.
- Captain O. G. Tunks, 23rd November, 1919.

Third Military District.

- Major W. J. Newing, 31st October, 1919.
- Major J. P. Fogarty, M.C., 5th January, 1920.
- Major A. H. Joyce, 29th December, 1919.
- Captain C. Friend, 19th November, 1919.
- Captain R. S. Andrews, 13th November, 1919.
- Captain L. W. Johnston, 7th December, 1919.
- Captain R. G. Stott, 8th December, 1919.
- Captain H. H. Holland, 29th December, 1919.
- Captain L. B. Cox, 20th December, 1919.
- Captain D. C. Worch, 9th November, 1919.

Fourth Military District.

- Lieutenant-Colonel D. R. Clayton, D.S.O., 17th December, 1919.
- Lieutenant-Colonel H. K. Fry, D.S.O., 26th December, 1919.
- Major W. L. Smith, M.C., 16th November, 1919.
- Captain R. L. Kenihan, M.C., 13th November, 1919.
- Captain E. H. Lewis, 11th October, 1919.
- Captain F. N. Wilcox, 22nd November, 1919.
- Captain R. J. Verco, 25th November, 1919.

Fifth Military District.

- Major M. B. Watch, 28th December, 1919.
- Captain J. A. R. Mitchell, 26th October, 1919.

Australian Military Forces.

First Military District.

Australian Army Medical Corps—

- Lieutenant G. H. Brandis, Australian Army Medical Corps, 3rd Military District, to be granted the temporary rank and pay of Major whilst employed at No. 27 Australian Auxiliary Hospital, 28th November, 1919.

Second Military District.

Australian Army Medical Corps Reserve—

- The resignation of Honorary Captain P. T. Thane of his commission is accepted, 21st November, 1919.

*Third Military District.**Australian Army Medical Corps Reserve—*

William Hart Steel to be Honorary Captain, 22nd November, 1919.

*Fourth Military District.**Australian Army Medical Corps—*

Captain G. M. Hains to be transferred to the Reserve of Officers, 1st January, 1920.

*Fifth Military District.**Australian Army Medical Corps—*

Captain O. F. Paget to be transferred to the Reserve of Officers, 1st November, 1919.

Australian Army Medical Corps Reserve—

Honorary Captain N. N. Davis to be granted the temporary rank and pay of Major whilst employed as V.D. Specialist, 5th Military District, 1st December, 1919.

Honorary Major G. W. Baker to be granted the temporary rank and pay of Lieutenant-Colonel whilst employed as President of the Permanent Medical Referee Board, 24th December, 1919.

The temporary rank of Lieutenant-Colonel granted to Honorary Captain F. J. Walden is terminated, 23rd December, 1919.

MONTROSE MATERNITY HOSPITAL.

The New South Wales Government recently announced its policy of opening a "ring of maternity hospitals and rest homes for women and children" around the city of Sydney, and later in large centres in the country. In furtherance of this policy, the first of these hospitals—"Montrose"—was opened at Burwood as a maternity hospital on January 14, 1920. Later "Fernleigh," Ashfield, is to be opened as a rest home to be conducted in association with the hospital.

In the absence of Mrs. W. A. Holman, the opening ceremony was performed by Mrs. David Storey, wife of the Minister for Public Health. Speeches were delivered by the Honourable David Storey, Sir Charles Mackellar, Dr. R. T. Paton, the Director-General of Public Health, and Mr. P. McGarry, M.L.A.

The Minister for Public Health announced that the two properties had been acquired by the Government and altered to meet the requirements at a total cost of £10,000. All patients would be treated entirely free of charge, although preference would be given to those who were most needy.

No definite arrangements have yet been made for the medical attendance on patients, but the Minister said: "The Government appeals to local medical men to assist the institution and also to local residents to interest themselves in its welfare."

It is proposed to take in about twenty patients (there are now seventeen beds equipped), and it is hoped to treat about 600 patients each year. A matron and sister, with the necessary qualifications, have been appointed and the staff is to be further augmented by one staff-nurse and six pupil nurses, all of whom must be certificated general nurses. Nurses from the Coast Hospital will be given preference among the applicants for training. It is hoped in this way to complete the training of nurses from the Government hospital.

Sir Charles Mackellar contended that this was not the first hospital of its kind in New South Wales. He recalled that in 1908 Mr. A. W. Green, now President of the State Children's Relief Department, was instrumental in having three such hospitals opened at Randwick, Thirlmere and on the Parramatta River respectively. He expressed the hope that the new hospital might show equally good results as its three predecessors, where, during the years of their existence, there were no deaths either among mothers or babies.

Sir Charles referred to the recent visit of Dr. Truby King to Sydney; speaking *à propos* the breast feeding of infants he caused amusement by saying that "the feeding bottle causes more deaths among babies than does the whisky bottle among their fathers." He recalled the interesting statistics that during the siege of Paris in the Franco-Prussian war, notwithstanding the starvation and crushing anxiety of the mothers, the death-rate of infants was 40% lower than before

the siege, due to enforced breast feeding. He quoted a further remarkable instance in his own memory, when, during the American civil war, the cotton spinners of England were reduced to great poverty and a large section of the population of Manchester and other adjacent towns was living on Government doles, the infantile mortality of Manchester was reduced one half for the same season. He spoke in condemnation of the nature of some advertisements for patent foods for infants and hoped to influence the Government to take some action in the matter. He regarded such institutions as "Montrose" as a potent factor in reducing the death-rate in illegitimate children, which in recent years had fallen from 25 per 1,000 to 10.7 per 1,000. He would like to see more done for the mothers of illegitimate children and looked forward to legislation such as had been passed in Norway in 1916, by which in certain cases the State took the place of the mother and, in directing what amount should be paid for the support of a child, a judge must take into consideration the monetary position of the father.

"Montrose" is a fine old brick house with a wooden annex to be used as a eight-bed ward, situated in beautiful grounds, in the middle of a prosperous suburb. Apart from the eight-bed ward, there are two four-bed wards and a labour room with one bed. There is no operation room. Much is yet needed to be done to convert the house into a workable midwifery hospital. For example, the walls are still covered with handsome papers; no isolation is provided; there are no arrangements for day rooms close to the wards to make the nursing easier and there is very little accommodation for stores of linen, drugs, etc. It is doubtful if this hospital is situated in an area in which it will be useful. If the policy of the Government is to be continued and further hospitals of the nature established, it is to be hoped that they will be founded in centres of thick population where they are more needed, in order not to incur the risk of falling into disuse, as was the case in the three Government institutions referred to by Sir Charles Mackellar.

THE TASMANIAN SANATORIUM FOR CONSUMPTIVES.

In the past the fate of the consumptive was sealed when the diagnosis was made. The belief in a cure in the days before Villemin and Koch was held by very few. Then came the revolution. The discovery of the tubercle bacillus closed the controversy and established the fact "that all phthisis was tubercular." The history of the curability of pulmonary tuberculosis is associated with the names of Bodington, Brehmer, Dettweiler and other pioneers. In the early days it was held that success in the sanatorium depended largely on the concomitants of a high altitude, bright sunshine and a rigidly enforced régime. For a long time it was held without challenge that the undoubtedly surprising restoration of health of consumptives treated in sanatoria was synonymous with cure. Statistical study and the following up of cases led to a revision of the over-sanguine impressions of the early days. The claim of 60% of cures was shown to have been based on a wrong conception of the process of repair. Enthusiasts endeavoured to save the situation by the substitution of the word "arrest" for that of cure. Time and experience, however, forced clinicians to admit that the prospects of a permanent removal of the clinical manifestations of pulmonary tuberculosis were good only when the treatment was instituted in the earliest stages of the disease.

The effect of the introduction of tuberculin obscured the issue still further. Ignoring the disastrous period following rapidly on Koch's discovery, during which tuberculin was obviously misused by a profession that had yet to learn the nature of the remedy it was employing, it can be said that there is to-day more difference of opinion concerning the therapeutic value of the many preparations available than there has been since the revival of their use. Indeed, there is some evidence in favour of the contention that the tubercullins are not truly specific and that any beneficial result that may accrue from their use, must be traced to the establishment of a protein anti-anaphylaxis. In Australia tuberculosis is far less wide-spread than it is in European countries. Both in Australia and elsewhere the incidence and the mortality have been reduced ostensibly by the improved hygienic condition of the home, by the greater vigil-

ance of medical practitioners in detecting infection in its curable stages and, to some extent, by the introduction of modern methods of control. We have little doubt concerning the possibility of applying preventive measures with success, notwithstanding the fact that the attempts hitherto instituted in various parts of the world have not been attended by anything approaching a dramatic diminution in the spread of the disease.

The conditions of trench warfare have led to an increase of infection. Consequently, the problem in Australia, as elsewhere, has become more acute. Every endeavour should be made to seek from among the returned soldiers all those who shown signs of infection, to divide these men into two classes, those with early curable infection and those with advanced disease, and to place each man in an environment that will give him the best chances for regaining his lost health. The same should be done in regard to the civil population. This is essential, not only in the interests of the individual, but as an integral part of the prophylaxis of tuberculosis. In other words, the sources of infection must be controlled. We have pointed out repeatedly that it is useless to set up machinery for the control of tubercular infection, unless that machinery is properly used. The sanatorium may not be able to guarantee a cure in every early infection, but it represents the best environment available at present for persons in this stage of the disease. The sanatorium has nothing to offer for persons with advanced disease. On the contrary, the patient in Turban's advanced II. or III. stage cannot be treated to advantage in a modern sanatorium. The presence of a person desperately ill casts a gloom over the whole sanatorium and detracts from its therapeutic value. From the point of view of prevention, it must be recognized that patients are kept in a sanatorium for relatively short periods of time and, as a rule, return to their homes after discharge. The patient with advanced disease should be kept in an institution suited for the treatment of this condition for long periods and in many cases, unfortunately, until the disease has run its course. The sanatorium is only of value when it is adapted to the general scheme of control and fitted in with the dispensary, the method of requiring the general practitioner to determine by all modern means whether or not tuberculosis exists among the contacts of his patient, the farm-colony or communal farm and the hospital for patients suffering from advanced pulmonary tuberculosis. It should therefore be under the direct control of the public health authority, whose duties include that of devising the means necessary for the control of tuberculosis, that of administering the institutions set up under the scheme and that of co-ordinating the work of the various institutions and individuals connected with the same.

Thirteen years ago some private individuals conceived the idea of erecting a few wooden huts on a low hillock in New Town, close to Hobart, Tasmania, and of calling this a sanatorium. The site was badly chosen. The disposition of the huts was by no means ideal. There was no provision for laboratory work and the institution in its earlier days bore but a faint resemblance to the well-known European establishments, which have undoubtedly contributed greatly toward the improvement of the prognosis of this terrible disease. But a few years ago there was no microscope in the place. We are unaware how the diagnosis and the control of progress was carried out. On November 22, 1919, some new buildings were formally opened by His Excellency the Governor. During the course of three or four years additional accommodation has gradually been added for the purpose of enabling the military authority to refer soldiers suffering from tuberculosis to this little institution. The new buildings consist of a satisfactory administrative block, with a good kitchen and suitable rooms for the Matron, the visiting medical staff, etc.. There are two dining rooms for patients and the nurses' and servants' quarters are satisfactory. The grounds of the institution are small and it has therefore been necessary to place the individual huts at irregular intervals, many too close together and some with a wrong aspect. The majority of the chalets are not badly built, but they have one defect, that the patients are sheltered from the sun in all hours of the day. There is a septic tank with a highly offensive smell. Notwithstanding the fact that the institution has been in existence for 13 years, the little

grounds are still in a state of wilderness. It has been announced that a landscape gardener is to be employed to construct lawns and to plant shrubs and trees. A few trees, provided that they do not grow too large, would be an advantage.

From the annual report for the year ending June, 1919, we gather that 96 patients were admitted during the 12 months. There were 37 patients in the cubicles on the first day of the year and 38 on the last. No information is given concerning the stage of the disease of the 80 civilians or of the 53 soldiers in the institution. We are informed that 41 of the civilians were discharged "as arrested cures." The medical officer, Dr. E. T. Macgowan, probably intends to convey by this expression that the signs and symptoms of the disease had disappeared by the time of the patients' discharge. Some improvement was recorded in 14 instances, while eight patients were discharged unimproved. Dr. Macgowan will find few practitioners with experience of the treatment of pulmonary tuberculosis to agree with him in his claim that persons with advanced disease do well in a sanatorium. The annual report contains no further information concerning the condition or progress of the patients.

The Committee of the Sanatorium has made an arrangement with the Department of Defence, according to which military patients are admitted to special chalets and are placed under the charge of a military medical officer, who visits the Sanatorium at regular intervals, and a military matron. There have been several changes of matron recently. The military sister now in charge and her staff nurse have had considerable experience and are utilizing their ability in endeavouring to overcome the inherent difficulties of their positions. The Department of Defence pays 35s. per week for each military patient admitted. It is stated that this amount covers the cost of maintenance. The total amount spent on maintenance, etc., was just under £4,000. It is impossible from the details published in the report to ascertain the actual expenditure per patient per week. It appears that the maintenance fees paid amounted to £1,252, which would be approximately £12 per patient. This is a little under one third of the total expenditure.

It would be to the interests of those suffering from tuberculosis in Tasmania if the Department of Public Health were to take over the Sanatorium, to buy a more suitable site and to transfer the chalets to it. The administration should be re-cast and the Sanatorium should be utilized as a part of a larger scheme aiming at the eradication of a very serious disease.

In the *Commonwealth of Australia Gazette*, No. 6, of January 22, 1920, a proclamation is issued prohibiting "the importation into Australia of brushes of any description or toilet articles containing or made from the hair of animals, which have been manufactured in Eastern or South-Eastern Asia, India, Ceylon, Japan, the East Indian Islands, or the Philippine Islands, unless a certificate from a responsible official of the Health Department of the country of origin is produced within sixty days of the arrival of the goods in Australia, satisfactorily identifying them and certifying that the hair contained in them or from which they are made was effectively cleansed and disinfected before manufacture."

It has been announced that Lieutenant-Colonel C. H. Anderson, Australian Army Medical Corps, has been awarded the Order of the Nile (Third Class).

Correspondence.

THE SIGNIFICANCE OF THE WASSERMANN TEST.

Sir,—The subject of the significance of the complement deviation test for syphilis has received much attention in medical journals for several years past and Dr. Tidswell's article in your journal of the 17th inst. will serve to remove a good deal of the confusion that still exists, by furnishing a brief and clear epitome of the usual result of the reaction in various stages of the disease.

There is one aspect of the subject, however, which is at the present time a matter of controversy and that is, the extent to which we should be guided by a negative reaction after treatment. The results of the test in treated patients are often paradoxical and it would appear that a negative reaction, even though it persists up to two years after the completion of a course of treatment, is not a satisfactory criterion of cure. Patients who have had syphilis and give a negative Wassermann test are either cured or in the latent stage. Which of the two is not easy to ascertain.

It would seem wiser, therefore, to base the amount of treatment on the stage at which the disease is attacked and to give the minimum amount of treatment which experience has shown to be necessary to cure the average case at that stage.

For primary syphilis it is advisable to supplement the arseno-benzol injections, however many be given, with a six to twelve months' course of mercurial injections and iodides, while, when the disease is first attacked in the generalization stage, one cannot safely rely on the effects of less than two years' intermittent treatment.

Yours, etc.,

C. J. WILEY.

233 Macquarie Street, Sydney,
January 20, 1920.

Medical Appointments.

It is announced that Dr. J. C. Ross has been appointed Public Vaccinator for the Midland District and Dr. M. W. Cave (B.M.A.) and Dr. Warren Meade (B.M.A.) for the South-Western District, Victoria.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xxiii.

Hospital for Sick Children, Brisbane: Honorary Orthopaedic Surgeon.

Caboolture, Queensland: Medical Officer.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
VICTORIA. (Hon. Sec., Medical Society Hall, East Melbourne.)	All Friendly Society Lodges (other than the Grand United Order of Oddfellows and the Melbourne Tramways Mutual Benefit Society), Institutes, Medical Dispensaries and other Contract Practice. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Australian Natives' Association. Brisbane United Friendly Society Institute. Cloncurry Hospital. Chillagoe Hospital.

Branch.	APPOINTMENTS.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	Contract Practice Appointments at Renmark. Contract Practice Appointments in South Australia.
WESTERN AUSTRALIA. (Hon. Sec., 6 Bank of New South Wales Chambers, St. George's Terrace, Perth.)	All Contract Practice Appointments in Western Australia.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Balmain United Friendly Societies' Dispensary. Canterbury United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Friendly Society Lodges at Lithgow. Friendly Society Lodges at Parramatta, Auburn and Lidcombe. Leichhardt and Petersham Dispensary. Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. Newcastle Collieries—Killingworth, Seaham Nos. 1 and 2, West Wallsend. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phoenix Mutual Provident Society..
NEW ZEALAND: WELLINGTON DIVISION. (Hon. Sec., Wellington.)	Friendly Society Lodges, Wellington, New Zealand.

Diary for the Month.

- Feb. 4.—Federal Committee of the B.M.A. in Australia (Sydney).
Feb. 4.—Vic. Branch, B.M.A.; presentation of Balance Sheet for 1919.
Feb. 6.—Q. Branch, B.M.A..
Feb. 11.—Tas. Branch, B.M.A., Annual Meeting.
Feb. 12.—Vic. Branch, B.M.A., Council.
Feb. 12.—Q. Branch, B.M.A., Council.
Feb. 25.—Vic. Branch, B.M.A., Council.
Feb. 26.—Q. Branch, B.M.A., Council.
Mar. 2.—N.S.W. Branch, B.M.A., Ethics Committee.
Mar. 3.—Vic. Branch, B.M.A..
Mar. 9.—Tas. Branch, B.M.A..
Mar. 9.—N.S.W. Branch, B.M.A., Executive and Finance Committee.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this journal cannot under any circumstances be returned.
Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.
All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, (Telephone: City 2645.)